ABSTRACT OF THE

Bowman Lecture

ON

THE VALUE OF EYE SYMPTOMS IN THE LOCALISATION OF CEREBRAL DISEASE.

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MR. PRESIDENT AND GENTLEMEN,—Recent advances in cerebral surgery have brought with them, in some respects, increased responsibility and increased anxiety for the surgeon in cases of focal cerebral disease. In these cases perhaps the gravest responsibility and anxiety is encountered at the very outset, when the regional diagnosis has to be made. It is true that our present knowledge of the anatomy, physiology, and pathology of the brain frequently enables us to diagnose the position of focal lesions, but it must be confessed there remains much to be learned before we shall be able to say that in all of the cases met with localisation can be successfully effected. Yet we may confidently hope that the difficulties which still beset this subject will gradually disappear; and we are encouraged to think so by contemplation of the marvellous progress which has been made in cerebral physiology within the last eighteen years. I feel sure we shall see quicker and better progress in cerebral localisation when many physicians and surgeons recognise more fully than they yet have done that the interests of science, as well as their own reputation, are best served by entrusting the examination of the brain in all these cases to skilled pathologists and microscopists, rather than by undertaking the necropsies themselves; and in the meantime, while our knowledge of the physiology and pathology of the brain is gradually increasing, we must be careful in our daily practice to employ all the facts which have hitherto been acquired concerning this interesting organ. It is my intention to review the symptoms which are derivable from the eye in cases of focal cerebral disease, and to consider how far they may be utilised for the localisation of cerebral lesions, inviting attention to the facts provided for us by clinical pathology, rather than to those of experimental comparative physiology.

In estimating the localising value of the focal eye symptoms which may be afforded by a given case of recent brain disease, we are immediately confronted with a difficulty which is common to all focal symptoms—the difficulty, namely, of distingushing between direct symptoms and the so-called indirect, or, as I would prefer to call them, "distant" symptoms: the former, as you are aware, being those which depend upon the loss of function of the part in which the lesion is situated, and which, consequently, are the symptoms it is desirable to point out; while the indirect symptoms are not the result of the local disorganisation caused by the lesion, but of its pressure, of disturbances of circulation to which it gives rise, and, it is also thought, of inhibition effects, all of these being liable to interfere with the function of parts of the brain more or less distant from the lesion.

Focal eye symptoms may be divided naturally into those which depend upon disturbances in the motor apparatus of the eyeball, including the intraocular muscles, and those which depend upon disturbances in the special visual apparatus. We have also to consider symptoms due to lesion of the nerve of ordinary sensation of the surface of the eyeball.

And first as regards the symptoms derivable from the motor apparatus. There is no centre in the cortex of one hemisphere (like those of the face, arm or leg), a lesion of which will produce ophthalmoplegia, partial or complete, of the opposite eyeball alone; because, the two eyes being associated in their motions, it is only those associated motions which are represented in the cortex. The commonest cortical lesion producing derangement of these associated movements is the conjugate lateral deviation of the eyes to one side. In paralysis, the eyes look at the cerebral lesion, as Prevost has expressed it; and in spasm, away from the side of the lesion. It is very apt to be a distant symptom, especially in cerebral hæmorrhage; and when the centre happens to be actually involved in the lesion, its function, being largely bilateral, is rapidly taken up by the opposite hemisphere, and hence, though it may be a direct cortical symptom, it fails, owing to its evanescent character, to be recognised as such; and, again, similar deviation may proceed from a lesion of the internal capsule or of the pons, where it involves the special nucleus for the associated motion common to the sixth and third nerves, but in conjugate deviation from a pontine cause (which is almost always a direct symptom), the eyes in paralysis turn away from the side of the lesion and in spasm towards it. Conjugate lateral deviation of the eyes, then, may assist us in the diagnosis of a cortical or capsular lesion from one in the pons; it may aid us in deciding in which side of the brain a lesion is situated when other symptoms are not readily observed, as in coma; and the varieties of the symptom, when it is due to disease in the pons, may enable us to form a refined diagnosis as to the precise seat of the lesion there.

Gowers has recorded an interesting case in which loss of motion of the eyes upwards was caused by a small tumour situated in the middle line behind the posterior quadrigeminal bodies, damaging them slightly, as well as the velum and the adjacent part of the inferior vermiform process of the cerebellum. In a case of tubercle of the corpora quadrigemina Henoch observed this same defect as the first focal symptom to make its appearance. Paralysis of the upward and downward motions of both eyeballs, sometimes with ptosis, while the lateral motions are unimpaired, may be the result of a focal lesion involving the third nerve nuclei in the floor of the Sylvian aqueduct; and, if attended by hemiplegia, the lesion involves the pyramidal tracts, probably at the level of the anterior quadrigeminal bodies, the posterior commissure, and the neighbouring part of the optic thalamus. Loss of power of convergence, accompanied sometimes by paralysis of accommodation, is a symptom, though occasionally a distant one, of lesion of the posterior quadrigeminal bodies. Deviation of one eye downwards and outwards, while its fellow is turned upwards and inwards, has only been seen with lesion of the middle cerebral peduncle. It is almost always a direct symptom, as is also loss of power of upward or of upward and downward motions of the eyeballs.

The fact that cerebral ptosis can exist alone suggests a separate cortical centre for this branch of the third nerve innervating the muscle of the opposite side; but, its position being uncertain, ptosis has no value as indicating the locality of a cortical lesion, though it may be of use in distinguishing the latter from one situated elsewhere, monolateral ptosis as the only focal symptom occurring with cortical lesions alone. Lesions causing bilateral paralysis of branches of the third nerve which are wont to be innervated together—loss of motion of the eye upwards, of motion of the eye downwards, of convergence, and double ptosis—are to be sought for in the quadrigeminal bodies. Basal lesions do not give rise to similar paralysis. Ptosis on the side of the lesion has occasionally formed a symptom in disease of the pons without paralysis of the other branches of the third nerve, except sometimes in so far as conjugate deviation is concerned, and without the third nerve being involved in the lesion. Again, by forming a factor of a crossed paralysis it may serve to localise a lesion in the crus cerebri. When the third nerve is paralysed by a lesion in this situation, it is the rule to find it paralysed as a whole; but paralysis of only some of the third nerve branches may be produced by a lesion of the cerebral peduncle, and the branch to the levator palpebræ seems to be the one most frequently implicated alone. Nothnagel has described a form of pseudo-ptosis in which there is (1) apparent ptosis on the paralysed side, owing to the contraction of the palpebral aperture, but the lid can be raised; (2) contraction of the pupil on the same side; (3) a shrinking back of the eyeball into the orbit, so that it seems to have become smaller; (4) an abnormal secretion of thin mucus from the corresponding nostril, of tears from the affected eye, and of saliva from the corresponding side of the mouth. He states he has found this train of symptoms in lesions of the corpus striatum. A common sign of disease of the crus cerebri is what is known as crossed hemiplegia, paralysis of the third nerve

on one side with hemiplegia of the opposite; its localising value, as Hughlings Jackson has shown, depends on their occurring simultaneously. Complete paralysis of every branch of the third nerve without any other paralysis is almost always basal; so also, as von Graefe pointed out, are those cases in which, where there is hemiplegia, it is slight as compared with the degree of the third nerve paralysis; and those cases, too, where there is an interval between the onset of the paralysis of the extremities and of the third nerve, are apt to be basal. Third nerve symptoms—in addition to those included under the headings conjugate deviation or paralysis, and ptosis—are sometimes distant symptoms. Tumours of the cerebral hemispheres, more particularly if accompanied by violent general head symptoms, indicating probably high intracranial pressure, are the lesions most apt to produce these distant third nerve symptoms. As a rule, the slighter the general cerebral symptoms are, the most likely are the third nerve paralyses to be direct symptoms. This rule, indeed, applies to other, as well as to third nerve, focal symptoms.

Paralysis of the fourth nerve, when combined with paralysis of other motor eye nerves, is difficult to recognise; and consequently, in such cases, it supplies but little aid for localisation. Solitary paralysis of this nerve, as a symptom of cerebral focal lesion, is extremely rare, and is more apt to be produced by a basal lesion. In combination with paralysis of the third nerve it speaks for a lesion in the cerebral peduncle, extending back to the valve of Vieussens, and has, I believe, been utilised by Meynert in this sense.

When paralysis of the sixth nerve occurs as the only focal sign, it is probably due to disease at the base, or it is a distant symptom; especially, Wernicke states, when the lesion is a cerebellar tumour. Paralysis of this nerve, sometimes in combination with the facial, simultaneous in its onset with hemiplegia of the opposite side of the body, indicates a lesion in the pons, usually a hæmorrhage, on the side corresponding to the paralysed nerve. Hemiplegia due to a lesion of the cortical motor region, which might happen to be combined with paralysis of the sixth nerve as a distant symptom, offers no difficulty in its diagnosis from hemiplegia with sixth nerve paralysis in pontine disease; for while the latter is a crossed paralysis, the former is homonymous.

Lagophthalmos, we know, is the eye symptom to which paralysis of the facial nerve gives rise. It is useful for localisation, inasmuch as it assists in differentiating a lesion in the internal capsule or in the facial motor centre of the cortex from one implicating the portio dura in the pons, as it is absent or very slight in the former cases, but very often markedly present in the latter. With a lesion in the lower part of the pons we are apt to have lagophthalmos with crossed hemiplegia; but, if the lesion be in the upper part of the pons, the fibres from the opposite side having here joined the motor tract, the hemiplegia and lagophthalmos will be homonymous. Nystagmus as a focal symptom has little localising value, but as a distant symptom Gowers states that it is especially common in tumour of the cerebellum. Crossed paralysis of the fifth nerve points to a lesion in the pons. Moreover, when the nucleus or fibres of the nerve in the pons are diseased, neuroparalytic ophthalmia rarely supervenes; while, if the lesion be basal, the corneal affection is the rule.

The condition of the pupils is rarely of much value in regional diagnosis. Although myosis is most commonly the result of pontine lesions, yet it may accompany disease in other parts—as, for instance, hæmorrhage in the corpus striatum, which bursts into the lateral ventricle, and in meningeal hæmorrhages. Bilateral mydriasis is frequently present in apoplectic coma, without reference to any particular locality. The same holds good as regards monolateral myosis and mydriasis, though the latter has assisted in localising a lesion in the cerebral peduncle. Loss of the pupillary reflex to light, apart from cases of paralysis of the third nerve, is a sign of lesion of the anterior quadrigeminal bodies or of the optic tracts, and may be utilised to distinguish these lesions from others which may cause loss of sight by implicating both visual paths beyond the corpora quadrigemina or both visual centres; for in such cases, notwithstanding the amaurosis, the pupil reflex is maintained. In cases of hemianopsia, similarly, the pupil reflex serves to establish a diagnosis between a lesion in an optic tract and one further on in the visual path or in the visual centre of the same side; for, if the pupil contracts actively to light concentrated on the blind side of the field, the lesion cannot be in the tract; but if it does not react, the lesion must be in the tract.

And now as to the second part of my subject, the localising symptoms derivable from the visual apparatus. Of these hemianopsia is one of the most common, as it is one of the most valuable. Complete and absolute homonymous lateral hemianopsia is often of great diagnostic value. It may be caused by a lesion in the cerebral cortex, or by one situated anywhere in the course of the fibres between the cerebral cortex and the optic chiasma; and, by taking concomitant symptoms into account, we are frequently enabled to say in what part of this course the lesion lies. As regards hemianopsia due to a lesion in the cerebral cortex, a lesion of the visual centre, pathological anatomy leaves no doubt that in man the visual centre is situated in the occipital lobe, and the evidence goes to show that the absolute optical centre chiefly occupies the cortex of the cuneous and of the superior occipital convolution, and also, especially in respect of the colour sense, the posterior part of the superior and inferior occipito-temporal convolutions. We cannot expect to be able to distinguish clinically between an absolute hemianopsia due to a lesion confined to the absolute visual centre, with or without its efferent fibres, from one due to a lesion involving at the same time other parts of the occipital cortex. We may conclude that hemianopsia depends upon an occipital lesion if it be unaccompanied by hemiplegia, motor aphasia, or paralysis of cerebral nerves, as direct symptoms (as might occur with a lesion in the posterior limb of the internal capsule on the left side), but be it remembered that one and all of these are liable to accompany lesions of the occipital lobe as distant symptoms. Aphasia, too, occasionally accompanies right cortical hemianopsia as a direct symptom, and they both, with word blindness, may be found in varying combinations in different cases. Cortical hemianopsia may be a distant symptom. Gowers has observed that at the onset of many attacks of cerebral hæmorrhage hemianopsia is present as a distant symptom of very fleeting character—so fleeting, indeed, that it does not complicate attempts at localisation. It may be incomplete, yet, though we do not at present know that a lesion of the visual centre can be so situated as to produce loss of precisely the upper or lower half of the half field, we should bear in mind Schäfer's experiments on monkeys, which showed that removal of a certain part of each occipital lobe gave rise to loss of the lower part of the field only in each eye. So much for absolute hemianopsia. But the lesion may be such as to destroy only the colour centre without reaching those for form and light. Eight cases of hemiachromatopsia are on record, and one of them, by Dr. Verrey of Neuchatel, is accompanied by an account of the necropsy. There are also some cases of loss of colour vision in the whole field of each eye with retention of the form and light senses, or the form sense may be lost in the half field along with the colour sense, while only the light sense is retained. Furthermore, cases of hemianopsia are on record in which, in part of the defect, both the colour and form senses were absent, but the light sense was present, while in the remainder of the defect all three visual perceptions were lost.

There can be no doubt that the centres for the colour, form, and light senses are all present in the occipital lobe and posterior end of the occipito-temporal convolutions; and it is probable that they are either, as Wilbrand suggests, arranged in layers one over the other in the cortex, or, as others think, they are placed side by side. Visual aura have sometimes been noted as a symptom of disease of the occipital lobe. Relative hemianopsia can only occur with lesions of the cortex; hemianopsia from lesions elsewhere must always include all the visual perceptions; also those cases of hemianopsia with some peripheral contraction of the other side of the field are due to cortical lesions. Hemianopsia from a lesion in the optic radiations will often be indistinguishable from the same symptom due to a cortical lesion. The defect may be incomplete, as the lesion may implicate only some of the radiating fibres; or it may be complete if they are all involved. Pronounced distant symptoms, such as hemiplegia, hemianæsthesia, ptosis, and so on, are more apt to be caused by a lesion here than in the cortex. A lesion in the posterior third of the posterior limb of the internal capsule—the sensory crossway—is likely to produce complete hemianopsia, because the nerve fibres are here collected in a small space. Hemianæsthesia will be present as an accompanying direct symptom; and

also, sometimes, loss of the other special senses on the opposite side from the lesion; and should the disease extend forwards to the anterior part of the posterior limb, hemiplegia will be added as a direct symptom. Moreover, if the lesion be on the left side motor aphasia may be present, by reason of the proximity of the path for speech on its way to the cerebral peduncle. In hemianopsia due to a lesion of the optic tract the defect in the field is usually complete, the characteristic differentiating sign being the hemiopic pupil. Lesions of the optic tract are, of course, apt to implicate the crus cerebri, but do not necessarily do so. Leber has pointed out that atrophy of the optic nerve is likely to make its appearance, and at an early stage of the case, in lesions of the tract. Total blindness of both eyes, when it appears as a focal symptom—apart from certain cases of double cortical hemianopsia, or of cortical hemianopsia combined with a lesion of the opposite optic tract,—can only be due to a lesion involving the whole of the chiasma or of both optic tracts. The great mass of clinical evidence is opposed to the idea that lesions of the corpora quadrigemina produce blindness.

A very remarkable visual defect is that known as mind-blindness, or loss of visual memory—blindness, we may say, of what has long been known as "the mind's eye." Sight in the ordinary sense of the word—the reception of the retinal images by the visual centre—is unimpaired, but the psychical realisation of the retinal images is not effected. The objects are seen, but the sight of them suggests no corresponding idea in the patient's mind. We are acquainted with several varieties or degrees of this symptom. In a well-marked case the patient may be unable to recognise the streets of the city in which he has been resident for many years, and will feel as if in a strange place; he may not know his own hall door. He may be unable to distinguish his wife from his mother, and his children may appear as strangers to him; he will be unable, when away from them, to recall to his mind's eye the appearance of the places and people that have been familiar to him all his life. Yet such a man will be perfectly capable, so far as his other intellectual faculties are concerned, of transacting business and of entering into the enjoyments of life. It is seen in cases of general paralysis, usually in the advanced stages. The position of the cortical centre for visual memory is still a subject of discussion. Hitherto all the necropsies have been made in cases of general paralysis, and for definite knowledge we must wait for the post-mortem examination of a case in which the symptom has been caused by cerebral hæmorrhage. Nothnagel, Wernicke, Wilbrand, and some other writers assign this function to all, or to most, of that part of the occipital cortex which does not form the centre of vision. Gowers thinks it is either in the anterior part of the occipital lobes or in the posterior part of the parietal lobes; but the latter, he believes, is the more probable. The curious and interesting fact that in Charcot's case, in a case recorded by Quaglino, in one by Landolt, and in my own case, a derangement of the colour-sense came on simultaneously with mind-blindness, seems strong evidence in favour of a localisation of visual memory very close to the visual centre. Cases, too, are on record in which absolute hemianopsia accompanied mind-blindness. I should therefore be inclined, in the absence of a conclusive necropsy, to localise this function very close to the centre for vision, probably in the occipito-temporal lobe. Mind-blindness may be a distant symptom. Word-blindness or alexia—loss of the power of understanding printed or written speech-symbols—is held by many to be nothing more than partial mind-blindness. A good many cases combined with right hemianopsia have been recorded, and a natural explanation of this combination of symptoms is supplied by the proximity of the centre for vision to the angular gyrus. Indeed, some authors go so far as to state that hemianopsia is present in all cases of word-blindness.

I may be permitted to briefly refer to a peculiar variety of alexia which has been seen in two cases, although we cannot at present utilise it for the purposes of localisation. One of these is reported by Brandenburg. The patient, who was also affected with right homonymous hemianopsia, was unable to read any printed or written letters or words, yet he could read off with ease long numbers reaching to tens of thousands in Arabic characters. In the second case (quoted by Brandenburg) Joly observed the same power of reading Arabic numbers, while the power of reading words and letters was lost. I do not know that alexia has been seen as a distant symptom. The remarkable symptom termed dyslexia was first described by Berlin. The patient is unable to read more than a very few words consecutively, either aloud or to himself, owing to a feeling of dislike or disgust which suddenly invades him, and which he cannot overcome. After he has read a few words, which he can understand well, he pushes the book away or hands it to the surgeon, while he draws his head back and turns it aside. After a brief interval the attempt may be renewed, but with the same result when a few words have been read. There is no dimness of sight, defect of accommodation, or pain in the eyes or head to account for the symptom. It usually comes on suddenly, and is the first sign of serious cerebral disease, being soon followed by other symptoms, such as headache, giddiness, aphasia, hemianopsia, hemiplegia, and so on. All of these cases have ended fatally. In every instance the lesion was on the left side of the brain, the patients being all right-handed. The disease seems to have occupied chiefly the inferior parietal lobule, extending sometimes as far forwards as the inferior frontal convolution, and sometimes as far backwards as the angular gyrus. In crossed amblyopia—in which the eye on the side away from the cerebral lesion is almost blind, with very contracted field, while the field of the other eye is also contracted, but in a less degree—the lesion has been found in the lower and hinder part of the inferior parietal lobule.

In conclusion, with reference to optic neuritis, it is merely necessary to state that it has practically no localising value; nor should I think it necessary even to do this much, but that in some recent cases of brain surgery it seems to have been tried to utilise the optic neuritis for localisation. Optic neuritis occurs in most cases of intra-cerebral tumour, irrespective of the seat of the disease.

And now, gentlemen, I have come to the end of this lecture, and have not as yet made any reference to that distinguished man in whose honour I am addressing you. But I do not believe you could wish that we should separate this evening without your having heard from me some expression of the esteem in which we hold Sir William Bowman, nor will I be guilty of such an omission. And here I might dwell upon Bowman's scientific attainments; upon the good work he did in years gone by, not alone in ophthalmology, but also in physiology; upon all this Society owes to his prestige and to his generosity; upon his clinical knowledge and his operative skill; and upon many another topic which his name suggests. But I prefer to remind you of the high standard of professional life he has shown us—a standard which we of a younger generation must endeavour to maintain. Conscientious in his relations with his patients, honourable in his relations with his professional brethren, careful not to put himself forward in any unrecognised manner, not seeking notoriety, simple, kind, courteous, dignified, William Bowman is presented to our mind's eye as the personification of the best of those qualities which go to make an English gentleman. We are, indeed, privileged in being permitted during his lifetime to offer some tribute to his distinguished scientific merit; but, while recognising how much we owe to him scientifically, I think, and I believe you will admit, we should not forget how much his every-day professional life has tended to give to the noble specialty he adorns that high tone which belongs to it. Our sincere hope is that Sir William Bowman may long live to enjoy the honour conferred on him by his Queen, the love of those who are dearest to him, and the warm, heart-felt esteem of this Society.

ON THE

CLASSIFICATION OF THE VARIOUS FORMS OF FUNCTIONAL ALBUMINURIA.[1]

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ALTHOUGH the fact that albumen frequently makes its appearance in the urine independently of Bright's disease or other structural lesion of the kidneys or urinary passages was known to the earlier writers of urinary pathology, still so little impression did the observations then made on the subject create, that, though Parkes, Roberts, and other physicians remarked that albuminuria might occur in con-

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nexion with general disorder of the system without there being disease of the renal organs, no apparent attention was paid to the fact. Since, however, the practice of examining systematically the urines of all patients for sugar and albumen has become customary with the profession, the subject has been again forced upon our notice, and has in consequence received considerable attention, and very valuable additions have been made to our knowledge with respect to it. Nevertheless, confusion still exists with regard to the conditions and character of this non-organic form of albuminuria; one author speaking of it as intermittent, another as cyclical, another as paroxysmal, another as latent, others as physiological, and so on, each applying a term which characterises the particular view he takes of the phenomenon and its causation. But a little reflection teaches us that it is difficult to apply a distinctive term universally. These forms of albuminuria are not all intermittent, though they usually are so; some, as long as they last, are as continuous and persistent as an organic albuminuria. A cyclical tendency to recur is not, again, a uniform phenomenon; whilst paroxysmal albuminuria is admittedly only of occasional recurrence. It is evident, therefore, that we want a common term which will include all varieties of non-organic albuminuria, without reference to any special clinical features, using those only for the purpose of further classification. It has therefore appeared to me that the term "functional" just supplies the want, and although but few writers as yet have followed the suggestion, and it is far from being generally applied, still it is gradually coming into use, and will, I believe, be finally adopted. It has the advantage of drawing the distinction between organic and non-organic albuminuria, and in this sense was originally applied by Prout; it is more correct than "physiological albuminuria," which implies that albumen is a normal constituent of the urine; whilst it is certainly less cumbersome than the phrase "albuminuria occurring in persons apparently healthy."

Applying, then, the term "functional" to distinguish generally that form of albuminuria which is not dependent upon structural disease of the kidneys, or proceeding from morbid conditions of the urinary passages, we can reserve the titles "cyclical," "paroxysmal," and "intermittent" for the purpose of designating those forms of albuminuria which are especially indicated by such characteristics. But before discussing the clinical aspects and the special and distinctive features of each of such subdivisions, it will be as well briefly to pass under consideration the theories which have been advanced to explain the presence of albumen in the urine under abnormal conditions. And here we are confronted by two opposite views, each of which has found favour among physicians of equal authority and repute. The first—the one to which I think English opinion most inclines—is that which maintains that albumen transudes, either through the glomeruli or renal epithelium, or both, whenever pressure is raised in the renal vessels. Those who hold this view, which derives its wide acceptation from the brilliant investigations of the late Dr. Mahomed, regard the kidney in great measure as a mere filter, and believe that the renal epithelium merely exercises a selective action in the removal from the blood of urea, uric acid, &c., and that whenever the pressure in the renal vessels rises albuminuria will proportionately ensue. Some who maintain that albumen thus transudes attribute to the flat epithelium which covers the glomerular tuft an albumen-restraining influence in health, which, whilst permitting the water and salts to transude freely, prevents the occurrence of albuminuria unless the pressure is raised sufficiently to overcome resistance or the epithelium is destroyed by disease. The other view is that the epithelium covering the glomeruli or lining the urinary tubules has the power of reabsorbing the albumen transuded by the vessels of the glomeruli or the tubules so long as it maintains its healthy function; but as soon as the epithelium is destroyed by disease, or its vitality impaired, it permits the passage of albumen with the other urinary constituents. Of these two theories, with the exception of some slight modification to which I shall presently refer, I certainly incline to the latter; for without denying the great influence increased pressure undoubtedly has in the causation and aggravation of albuminuria, I cannot regard it as the most important factor, or even a necessary one. Cases certainly do occur in which we have no palpable evidence of increased pressure in the renal vessels, and in which from other circumstances we might infer the contrary, and albumen be nevertheless abundant in the urine; whilst in other instances, when we might reasonably suppose a high degree of renal tension to be present, no albumen will be found. On the other hand, many pathological circumstances seem to favour the view that the epithelium plays a considerable part in preventing or favouring the transudation of albumen. Still, I cannot accept the view that the epithelium exercises its restraining influence by the reabsorption of the albumen brought to it by the renal vessels; nor, on the other hand, that it mechanically prevents transudation. The objection to the reabsorption theory is, to my mind, its clumsiness, for Nature never goes out of her way to perform unnecessary operations; and why should the epithelium first attract the albumen from the renal vessels if it is not required for the urine? As regards the mechanical theory, we need only name it to reject it, since albuminuria so frequently occurs without the slightest evidence of either past or present desquamation of the epithelium. Then what explanation remains which will sufficiently account for the varied conditions under which albumen appears in the urine? I believe it to be briefly this: that the renal epithelium (glomerular and tubular) has two functions, a selective and metabolic. In health, this epithelium exercises its selective function by the withdrawal from the blood brought to it by the vessels of urea, water, salts, &c., to form the urine; and its metabolic function in the converting the albuminous elements concerned in its own nutrition, and perhaps also the conversion of any effete albumen, up to a reasonable amount that may have escaped conversion elsewhere, into urea and other nitrogenous excreta. We know the urinary function is liable to considerable variation, and we may reasonably suppose that the metabolic process is likewise also liable to disturbance from abnormal conditions. Thus, for instance, (*a*) under increased blood pressure the renal vessels may bring to the epithelium an excess of effete albumen, which is beyond its powers of conversion into urea; (*b*) or there has been a sudden destruction of some albuminous constituent in the body (such as I believe occurs under increased hæmolytic action of the liver, as pointed out by Noel Paton, Oliver, and myself), in which a considerable quantity of an albumen unfitted for nutrition is carried to the kidneys, and the epithelium, unable to deal with this sudden influx, passes it through into the urine; (*c*) or, again, the epithelium, destroyed by disease or its metabolic function, enfeebled by impaired vitality, or paralysed by some toxic agent, fails to convert the albumen brought to it by the renal vessels into urea &c.; (*d*) or it may happen that the form of albumen is not in a state to undergo metabolism, and yet must be disposed of; thus egg albumen, when injected into the veins of animals, seems to induce albuminuria more readily than serum-albumen. If this view of the function of the renal epithelium be established, we shall the more readily be able to understand the conditions which determine the various forms of functional albuminuria.

Cyclical albuminuria.—This may be either intermittent or continuous, but it always presents one marked feature, a periodic exacerbation with respect to the amount of albumen present in the urine during twenty hours. This exacerbation, as Dr. Pavy has pointed out, occurs usually during the morning hours, after rising, and declines as the day advances, so that towards night the albuminuric tendency has either completely passed off or only traces of albumen are to be found in the urine. A similar cyclical variation has also been noticed with regard to the reaction of the urine, for it was pointed out many years ago by Dr. Bence Jones that the acidity of the urine was greatly depressed during the forenoon—indeed, often becoming alkaline, and depositing in consequence phosphate of lime. Dr. Bence Jones considered this depression of the acidity of the urine was caused by the withdrawal of acid from the system to supply the requisite acidity for the gastric juice. Dr. Edward Smith, in his valuable contribution on Cyclical Changes in the Body in Health and Disease, has also noted that during the morning hours there is also an increased elimination of urea and carbonic acid. This cyclical tendency was first attributed to the influence of food, to its stimulating effect on the system after the fast of the night, and the rebound of the vital forces after a period of comparative dormancy. But it was found that the phenomena did not depend entirely on food, although the conditions were more marked when it was taken, and that the mere act of rising

was often sufficient to induce it. Similarly the tendency for albumen to appear in larger quantities in the urine on rising from bed in the morning has been attributed to the ingestion of food; but though it is most marked when food is taken, it does not depend upon it. Indeed, I have often experimentally interfered with the cycle by keeping the patient in bed, and, although he had his breakfast as usual, the albumen did not appear till he was permitted to rise late in the day, when it at once recurred. The explanation of this, I think, is as follows. The sudden change from the horizontal to the vertical position, especially in delicate persons, has a tendency to cause a temporary mechanical distension of the vessels of the lower part of the body. Now, as regards the kidneys, this brings more blood to the epithelium, and this, if the vitality is at all impaired, unable so suddenly to exercise its metabolic function in the conversion of the excess of albumen thus brought to it into urea, permits its escape into the urine. The exposure of the surface of the body to the colder atmosphere of the room as compared with the warmth of bed probably aids in bringing about this increase of pressure in the vessels of the abdominal viscera by driving the blood from the cutaneous surface; whilst when food is taken we have the increased hæmolytic action of the liver as an additional factor. Cyclical albuminuria is met with in persons of all ages, though most frequently in young adults, and most commonly in the form that has long been described under the term "albuminuria of adolescents." Beyond the albuminuric condition there is nothing specially to note with regard to the urine; it is often of rather higher specific gravity and deeper colour than usual, especially that collected after breakfast, probably from an increase in the amount of urea caused by the hæmolytic action of the liver before referred to; but the specific gravity may be comparatively low and the colour pale. The patients are for the most part fragile looking rather than anæmic or sallow, but instances of this form of albuminuria are to be met with in apparently robust and healthy-looking individuals.

(To be concluded.)

ARTHRECTOMY *V.* EXCISION OF THE KNEE.[1]

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IT was about the year 1850 that Sir William Fergusson called anew the attention of the profession to the operation of excision of the knee. In his earlier years he had himself seen only one instance of it, and the result had not impressed him by its excellence, for the patient was obliged to use a crutch, the limb hung useless, it was shorter than its fellow by several inches, and so flexible at the cicatrix as to be totally unfit for support or progression. Nor did the few cases which had been recorded impress him more favourably, and he tells us that in selecting amputation in his own practice he had been influenced by the consideration whether the object to be gained by the patient would be worth the risk to be incurred; and that he had invariably—until a date which, when writing in 1857, he called recent—come to the conclusion that by removing the limb above the seat of disease he had done what was best for present safety and future comfort. But this persistent advocate of conservatism in surgery had ever felt a reluctance—which, indeed, is invariably shared by all surgeons—to sacrifice a limb; and we learn from his work on "Practical Surgery" that, notwithstanding early prejudices, he ventured in July, 1850, to perform the operation of excision of the knee joint on the living subject. The case seemed to be an exceedingly favourable one for operation, and it can hardly be doubted that in the present day it would have had a successful issue. Unfortunately the patient died on the ninth day of acute osteo-myelitis of the femur, which clearly was of septic origin. In spite, however, of this unfortunate result, the operation thus reintroduced by Sir William Fergusson—and no fact could better show how commanding was his then position—was soon repeated by many surgeons in various parts of the country, and we find him writing in the fourth edition of his book in 1857 that "since the last edition of this work was published an eventful epoch has occurred in the history of this operation." By himself, by Jones of Jersey, by Mackenzie, Butcher, Price, Henry Smith, Page of Carlisle, Thomas, and others, the operation had been performed; so that whereas between 1781 and 1830 there had been only nineteen known instances of excision of the knee, we find Sir William writing that he "knew of no other operation, as it may yet be called, in the whole range of surgery which has been so frequently performed in such a brief period of seven years, and that he had confidence in stating that he knew of none so thoroughly worthy of the attention of the surgeon." Conservatism was at that time becoming a more dominant force in surgery than it had previously been, and Sir W. Fergusson believed that the pity, amazement, and horror which were then uppermost in the mind on hearing of amputation of the arm for disease of the elbow would in a few years hence be felt when statistics had shown how patients had fared after amputation of the thigh for disease of the knee. Time, however, was above all things needed to tell what were the ultimate results of excision of this joint, and one of the most important contributions in this country to the subject was that brought before the Royal Medical and Chirurgical Society in November, 1868, by Professor Humphry of Cambridge, who had enjoyed unusual opportunities for practising the operation in a large number of suitable cases. He had previously brought before the same Society in its session of 1858 the account of ten cases, and his remarks suggest that he was then pleased and satisfied with the operation. Excisions, he then said, offered the prospect of a very useful limb in cases where from the extent of disease or deformity there was no longer a prospect of a useful joint or of the limb being preserved—a better prospect, in his experience, than did any other procedure, and with little risk. The chief danger to be feared was a continuance of suppuration, undermining the health and rendering amputation necessary because of the tendency of disease to linger long in the synovial membrane. This was the most frequent cause of failure; but nevertheless his success had been remarkable, for up to this date, of forty-five cases of excision of the knee, thirty-three recovered and two died. Nine underwent amputation; of these, five recovered and four died. One was still under treatment. The record of these cases, and of some brought forward at the same time by Mr. Henry Lee, served to show that even in the most successful cases there was one great disadvantage of the operation, when undertaken for extensive disease in early life, that the resultant limb was prone to have its growth arrested and to be considerably shorter than its fellow. Thus we read of shortening of two and a half, four, and two inches, and even these amounts must have been exceeded, for in two cases published the other day by Mr. Henry Lee[2] of excision after twenty years, one showed shortening of five inches and a half, the other of six inches. Results such as these, and the fact that recovery had sometimes been obtained only after prolonged suppuration and at great peril to life; that there was often much difficulty in keeping the ends of the femur and tibia in apposition, as witness the many suggestions which have been made for the attainment of this object; the fact, moreover, that many cases, after all, came to amputation, let alone the number who died,—served to lessen the enthusiasm there had been as to the value of the operation; and I suppose it would not be very wrong to say that from 1870 to 1880 excision had not advanced in general surgical favour, and was probably not performed as often as it had been in the previous ten years. While, however, the operation of excision was falling somewhat into disfavour, a vast change was coming over the practice of surgery. The great principles of Lister's teaching were being brought home to surgeons, and were bringing within the range of surgery many new operations on many and various parts of the body. To name one region only, the surgery of the joints has been thereby wholly changed, and in our hospital work one frequently has the opportunity of seeing recovery after injuries of joints and various forms of joint diseases which, it may be said without untruth, would have been hardly possible twenty-five (perhaps not more than five) years ago. The surgeon has learned that a joint—even the knee joint, with its intricate synovial pouches—may be opened without risk or harm, and

[1] Paper read at the Harveian Society on Nov. 1st, 1888.

[2] THE LANCET, April 21st, 1888, p. 769.

he has thus been led to explore the cavities of joints at a much earlier period of disease than used once to be the case. Every day, in fact, he sees what benefits accrue from early incision, washing out, drainage, and irrigation in cases of injury, for example; and in cases of disease from the removal of those structures in a joint which happen to have become affected, instead of waiting until the process of disease has run on to complete destruction of all the constituent parts of the joint, when alone it used formerly to be thought justifiable to interfere, and then by removal of the limb. The principles of Lister's teaching have done this for joint surgery, and have provided another and stronger reason than the mere defects in the operation itself for total excision of the knee becoming rarer and rarer, and for its being supplanted by that other operation of which I wish to speak to-night, and which is known by the name of arthrectomy or erasion.

I have given this short historical *résumé* because it is not in itself uninteresting, and because it serves well, I think, to show how the operation of arthrectomy has come into vogue. It is curious to see how it has grown from small beginnings—how, as it were, it has felt its way until it has attained its present importance and range. Thus one of the earliest notices which I can find upon the subject is in a discussion which followed a paper on excision of the knee in early life by Professor Stokes, read at the meeting of the British Medical Association at Ryde in 1881, and in which Mr. Cross of Bristol, in the course of his remarks, advised "early incision with antiseptic precautions, so as to examine the joint and remove the diseased part. He referred to a case in which he had taken away nearly the whole of a carious condyle, and thought that such an operation, which left a synovial membrane and a movable joint, was infinitely preferable to a resection of the whole joint. In his opinion resection of the knee was almost a thing of the past." Between that time and this there have been numerous papers on the subject, by Wright of Manchester, one of the earliest pioneers, by Barker, Clutton, Bilton Pollard, Sheild, Owen, Keetley, and many others, and the time has come, I think, for forming some opinion upon the operation.

What, then, is arthrectomy, and what do we seek to obtain by it? Which are the cases suitable for it? What are its advantages? What are its results?

First of all let me say that, in considering the question of the best method of treating diseases of joints, we cannot ignore, for very much depends upon, the social position of the patient. The child of the well-to-do householder, for example, is in a very different, is in a very much better, position than the child of the poor labourer or artisan. The beginnings of the disease are more surely recognised, treatment is begun earlier and is more rigorously carried out, and his surroundings are such that all that fresh air and good food can do for him is brought to bear upon his general condition of health. The synovitis which is the result of some trifling injury—a sprain it may be—has thus the opportunity of complete subsidence, the tissues of the joint are less prone to pass into that morbid condition in which the tubercle bacillus finds a suitable breeding-ground and home, and none of those later results arise with which we are familiar, and which, in the main, result from neglected and unresolved inflammatory processes. All of us must have seen cases in which, under these conditions, complete recovery has ensued from absolute rest, local pressure, good feeding, and fresh air; and no one will, I think, deny that in this mode of treating joint diseases a great stride forwards has been made since Thomas introduced the splints which always will be known by his name. Not so with the poor; and thus it happens that our hospitals contain cases which are but rarely seen amongst the wealthier classes; and too often the patient comes to us when there is no whole part in the joint; when the synovial membrane is so structurally changed that resolution or recovery of its natural condition is no longer possible; when the cartilages have been eroded, and the bone has been seriously invaded by the disease; when possibly there is much deformity; and last, but by no means of least importance in the clinical picture now presented, when the general health has been seriously undermined. In cases of this kind no surgeon would hesitate for a moment to use the knife, even though it were necessary to amputate the limb. But there are conditions less pronounced than those which have been named, when treatment by prolonged rest is either unavailable or has been already tried and found wanting, and in which, by a much less formidable operation than the old classical excision, he may succeed in removing and arresting the processes of disease, and in preventing the future onset of such widespread changes. He seeks to do this by the operation of arthrectomy or erasion, and we may answer the question what it is by saying that it differs from excision in this, that it is content with removing diseased structures alone, with removing no more, but at the same time no less, than is absolutely necessary to clear away morbid tissues, and falls very short of (though at the same time it may be said to compass more than) the older operation, which, in the main, consisted in slicing off pieces of femur and tibia, in order that new and presumably healthy surfaces of these bones might be brought into apposition, and ankylosis in the end result. Admitting altogether the disadvantages under which that operation laboured in the pre-aseptic days, it is no wonder that when portions, it might be, of diseased synovial membrane were left behind there arose suppuration, interference with healing, the subsequent necessity of amputation, and grave risks of septicæmia and pyæmia when the open cancellous tissue of the bones was subjected to the malign influence of neighbouring and unhealthy discharges. In arthrectomy, however, there is no such risk, for the diseased tissue, whatever it may be, is all taken away, and in no case is there any occasion for encroaching upon or removing, as the old excision removed, the growing line of the bones. And, in acting thus, let us consider for a moment what it is that we wish to obtain. We wish by a removal of disease, no matter in what structure it may lie, to place the parts of, about, and around the knee in a condition of health, so that reparative processes may begin, that the joint may either be preserved or that sound ankylosis may take place, that the growth of the limb shall not be arrested, and that, rid of a grave source of constitutional disturbance and of future danger, the general health may be established and improved.

I do not intend to enter into the large and interesting question of the tubercular nature of these joint diseases nor the part which they play in tubercular generalisation, for the subject has been dealt with at length in the lectures which were given in the summer by my friend Mr. Barker at the Royal College of Surgeons. Therein will be found the strongest arguments, I will not say for a belief that the tubercle bacillus is the actual cause of the mischief which we seek to lessen and remove, but for early operative interference in the class of cases which we are here considering. For it comes to much the same thing whether the tubercle bacillus be already there or whether it be not, the diseased structures of the joint are the very places where it likes to make a lodgment. If it is already there, the sooner we evict it the better; if it is not already there, the sooner the better that we get rid of a tissue whose condition forms a standing enticement for this noxious organism to come and occupy that tissue as its own. Do not let it be thought that I advocate the indiscriminate arthrectomy of every diseased knee joint that comes before us. There are cases, of course, chiefly those of recent origin and with a clear history of injury, where no one would think of an operation until perfect rest had been enjoined and carried out for a reasonable time; but given a case where we have a history of prolonged swelling and pain in the joint, with increasing deformity and a history that rest has been of no service, where, moreover, the synovial membrane is obviously thickened, and it may be here and there pulpy and soft, presenting that peculiar feel which tells at once that the joint enlargement is due to something other than a collection of fluid within, and that, as so often is the case, the inside is probably in a worse condition than the outside aspect would seem to indicate, then I believe that the time for operation has arrived. The same also must be said with no less force of those cases where persistent local pain and tenderness lead to something more than a suspicion that there is a focus of disease in the epiphysis of either tibia or femur. The fear of operating need never deter us from examining the inside of the joint. All the better if the disease to be removed is but limited in extent. The operation itself can do no harm.

I do not propose here to give an account of each and every step of the operation; nor, indeed, does it seem to me possible to lay down any precise laws as to this or that line of incision which ought to be followed, or this or that method of dealing with the bleeding vessels or of obtaining union by the first intention. Much must depend on the case itself; much also on the choice, will, and experience of

the surgeon; more perhaps on the result which it is hoped to obtain—ankylosis or a movable joint. The great thing is to expose the joint thoroughly so that we may actually see how with scissors, scalpel, gouge, or raspatory to extirpate every particle of disease, whether in synovial membrane, semilunar cartilage, inter-articular ligament, or the bone itself. Personally I believe that this can be done by the old horseshoe incision, which curves below the patella; but some surgeons have found a difficulty thereby in reaching the pouch of synovial membrane beneath the quadriceps. To meet this, the joint has been opened by a transverse incision and division of the patella; by a longitudinal incision, passing through the centre of the patella, which can be sutured together afterwards (Riedinger); and Mr. Clutton has operated by a "long curved incision through the extensor tendon just above the patella, and prolonged downwards on each side to the line of articulation." Of one thing I feel at present convinced—that in cases where there has been extensive disease, and much tissue therefore has been removed, we shall do wisely not to hope for, or attempt by any after treatment to obtain, a movable articulation. Ankylosis in the straight position is the thing to be aimed at, and it is therefore unnecessary, in my judgment, to be particular about saving bits of the crucial ligaments which may chance to be healthy, or to trouble about resuture of the ligamentum patellæ. These structures are not, I think, of much practical use afterwards, and the effort to save them and reunite them must add to the time which the operation takes. At best the operation is a long one, and the saving of time is of some moment to the patient. Moreover, we are not going to slice away portions of the bones; diseased parts only will be gouged out; and the tibia and femur lying thereafter in close apposition, there is less of that tendency to displacement which was so troublesome after excisions when a large gap was made in the place of the resected joint. The ends of the bones ought to fit closely and accurately together, and the only exception to the statement that diseased bone is alone to be removed is the necessity that may be found, in those cases where there has been much displacement, of taking away some small piece of one or both condyles, in order that the tibia and femur may come together in a straight line. There ought, at any rate, to be no occasion for pinning the bones together with ivory or steel. I should like to hear what surgeons have to say concerning this, but I am more anxious to know what has been their experience in those cases where the disease has been but small in extent, and where the attempt has been made to obtain a movable joint. English surgeons have not hitherto said much on this point, and the best information to be obtained on the subject is in a recent paper by Sendler.[3] He records fifteen operations on thirteen patients, and in the last three of them he seems to have obtained five more or less movable limbs. He opened the joint by long lateral incisions, as recommended by Volkmann and König, without completion of the horseshoe incision or division of the ligamentum patellæ. One, a child of two years and a half, had the synovial membrane dissected away, and the joint thoroughly washed out. Recovery took place with "perfectly normal movement." The second case was that of a patient aged twenty-two, from whose left knee the synovial membrane was dissected out, and subsequently in three weeks a portion of the head of the tibia was gouged away, and from whose right knee the synovial membrane also was dissected at a later date. Ultimately there was some movement in both joints, and the man was able to walk well. The last case is a child of eight, who was discharged from the hospital with a movable joint—extension normal, and flexion nearly so—after dissection of the synovial membrane from the left knee, and from whose right knee four months afterwards the synovial membrane and a piece of the internal condyle were removed. In this case the ultimate movement is spoken of as having been nearly normal. The gait, moreover, was natural. Sendler says that in all these cases movement was begun before healing was sound. I would ask, What risk is there in this? By this method of lateral incision the structures of the extension apparatus are of course left intact, but the difficulty of examining the whole cavity of the joint by these incisions must be great, and there must be risk of leaving disease behind. This is probably what happened in the case where a second operation had to be undertaken on the tibia in three weeks.

[3] Dtsch. Zeitschrift f. Chirurgie, 1888, Heft iii. and iv., p. 307.

To meet this objection, and with the deliberate intention of trying to obtain movement afterwards, Tilling opens the joint by the horseshoe incision; but instead of dividing the ligamentum patellæ he chisels off that part of the tibia to which it is attached, so that when the disease has been erased this portion of the bone may be again united by pins to the tibia, and the extension apparatus may be preserved intact. Has anyone had personal experience of this method? It does not seem to me to have been very satisfactory in the five cases which Tilling himself records this year;[4] for of the first, a boy of twelve, we read that five months after the arthrectomy no more movement could be made because of pain; of the second, a man aged thirty-four, that all hope of movement had to be given up because of the great extent of the arthrectomy; of the third case, a girl of eighteen, that slight movement in the direction of flexion was possible; of the fourth, a girl of eight, that after a second erasion she was going on crutches, nothing being said as to movement; and of his last case, a boy of seven, that at the time of a second scraping, and when under an anæsthetic, the knee could be bent to a right angle. This is clearly not a very promising record as to movement after an operation specially designed, be it remembered, that movement may be secured. Nor do I gather that in the nine cases recently recorded by Mr. Bilton Pollard[5] there is much that is promising in this matter, although of one of them, a child of three, from whose knee the synovial membrane alone was removed, the cartilages being left intact, we read that "the joint was sound, and movement could be made without pain." We need further information upon this point, and although I feel that with my present knowledge I may perhaps be altogether wrong, yet I am inclined to think that good firm ankylosis is the thing for which we ought to strive. There surely must be some risk in commencing passive movement before the parts are soundly healed, and there is this further risk, it seems to me, that when the operation is undertaken with the hope and design of obtaining a movable knee afterwards, the joint may not be as thoroughly inspected as it ought to be, and some diseased foci may be left behind. The real purpose of the operation has not then been attained. Moreover, the movement to be gained can at the best be only slight, and it is very questionable whether a knee that is soundly ankylosed in a straight position does not provide a limb more practically useful than one in which at the middle of it there is a possibility of bending the limb a few degrees. Much of course depends upon the extent of the operation in each case. It is clear that we are more likely to obtain a movable joint if the disease be limited, and therefore that if this be our aim the operation must be undertaken early. I know the hesitation there will be to operate as early as we ought, and it will come to pass that in the great majority of our cases the thing at which we shall have to aim, as the best of all possible results, will be sound ankylosis in the straight position. And in the after treatment we have to take special care to keep the limb fixed in this straight position, and we must not relax the use of splints or plaster of Paris until the ankylosis is secure. By so doing we may effectively prevent flexion. One of the cases here to-night will show how carelessness as to the splint when the child was at home led to an accidental flexion of a limb which would otherwise have been perfectly straight; and in another, I am sorry to say, the limb is not now as straight as it ought to be because the splint was given up too early. The operation, however, has in it yet other advantages; it has in it something which is not less important than the securing of a useful limb, and that is the removal of all traces of disease, and of lessening the chances of generalisation of the tubercle poison. No one who has had experience of arthrectomy of the knee can have failed to notice how great has very often been the improvement in the general health when the diseased structures have been removed—not solely, I think, because there is an end of the pain and lameness and incapacity. And if these results can be brought about by an operation which in itself appears to be tolerably free from danger, and which at the same time restores to the patient a useful limb which shall grow with the growth of the body and keep pace with its fellow, then we may claim that that operation has, or ought to have, a secure position in surgery, and that it is one which may be advised with

[4] Centralblatt f. Chirurgie, 1888, No. 4.

[5] THE LANCET, vol. i. 1888, June 16th and 23rd.

safety, and at an early period, in a large number of cases.

I must not, however, forget that the title of this paper is Arthrectomy *v.* Excision, and if I have spoken much in favour of the plaintiff in this action, I would not have it thought that the defendant has no case. Excision of the knee shares with arthrectomy precisely the same advantages that are to be derived from our modern improvements in wound treatment, and the risks of septicæmia and pyæmia, or of the necessity of later amputation because of suppuration, are greatly lessened. I know of no recent statistics on this point, but no one will question, I think, that the immediate results of excision have, with all other operations immensely improved in the last ten years. But no antiseptics, nor any healing by first intention, can lessen the chances of arrested growth in the limb when excision is performed in young people; and that operation, in my opinion, must be reserved for cases in which the knee has become ankylosed in a flexed position, or in which, on proceeding to the operation of arthrectomy, it is found that the disease of the bone is so extensive that mere scraping and gouging are insufficient for its removal. This was what happened in a case which I saw last week under the care of my colleague Mr. Pepper; and I operated myself on the same day on the knee of a man aged twenty-seven, with a history of disease of five years' standing, where the operation performed was neither an arthrectomy nor an excision, but a combination of the two. The surgeon must be prepared for this sort of thing, and it may even be that he will find conditions which contra-indicate the possibility of success from arthrectomy or from an arthrectomy excision, and amputation had better be done at once. Thus in one case—a lad of fourteen—there was found such a rarefying osteitis of the lower end of the femur that the femur broke three inches above the condyles during the manipulation entailed by the operation; and in another the bursa under the popliteus was found extensively diseased, and practically forming a large abscess cavity in the calf. Conditions such as these not only call for amputation, for which therefore the patient ought to be prepared: they show how much better it would be to prevent such things arising by early operative interference, when a mere arthectomy may suffice. Surely everything points to the advisability of early operation, unless there be the most distinct evidence of improvement from rest. We do not want to have to do an operation at all like that of the old excision. Let us operate at a time when we shall have to sacrifice no more than is absolutely necessary for the removal of disease, when by such removal we shall place the tissues of the joint in a condition in which repair, once started, is sure to go on, when we can preserve the growing limb in its natural length, and, by improving the general health, shall fortify the patient against the possible inroads of future disease. These are inestimable benefits, and the more they are known the better will it be.

SACCHARIN.

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IN view of the enormous increase in the use of saccharin for the purpose of sweetening foods, beverages, and medicines, we have been led to institute experiments, with the view of determining whether this substance is poisonous or not when given even in excessive quantities; and, if not poisonous under these or other conditions, whether its use in moderation interferes with the digestive processes, so as to render it advisable to forbid its use as a substitute for sugar. That saccharin is not a food is manifest; but there are so many circumstances under which the use of a sweetening agent in place of sugar is desirable, as to render it advisable to determine, if possible, whether the dietetic use of saccharin is innocuous.

1. As to the non-toxic nature of saccharin we have no doubt. Reliable continental experimenters have admitted this, and we have confirmed their observations. To an underfed dog we gave daily for five days two grammes of saccharin (equal in sweetening power to more than a pound of sugar), in addition to food *ad libitum*. The animal increased in weight, and no inconvenient results were observed. We mixed large quantities of saccharin with the food of mice; they ate of the mixture *ad libitum*, freely, and for a considerable period, and in no single case was there any manifest action on the health of the animal.

2. As saccharin has decided antiseptic properties, and is capable, in sufficient quantities, of stopping the action of organised ferments, we ascertained its extra-corporeal action on the soluble ferments, and found that in respect of the peptic digestion of fibrin 0·1 per cent. of saccharin has no retarding influence, whilst 0·25 per cent. slows the process decidedly, and 1 per cent. greatly retards it: 0·1 per cent. of saccharin is the equivalent of 30 per cent. of sugar—an impossible dietetic quantity. The diastatic solution of starch was not hindered by 2 per cent. of saccharin. The ammoniacal fermentation of urine is retarded when saccharin is added to it, or when saccharin is taken—an important fact in clinical medicine. The putrefactive decomposition of a pancreatic digestive mixture we found was not prevented by the admixture of saccharin to the extent of 1 per cent.

Experiments on the extra-corporeal action of saccharin on the digestive ferments are, however, of no significance in determining the effects which saccharin would have when taken with food, since they involve the maintenance of a constant fairly strong solution of saccharin in the digestive medium—a condition which does not obtain when saccharin is taken, since this substance is quickly absorbed, and is excreted in the urine.

The following experiment was made for the purpose of exactly determining whether saccharin influences gastric digestion. Two similar dogs, after having fasted for thirty hours, were each fed with 300 grammes (about 11 oz.) of lean beefsteak, equally cut up and divided. The 300 grammes of steak contained 69 grammes (i.e., 23 per cent.) of dry solids. No. 1 dog weighed 21 lb., and had no saccharin; No. 2 dog weighed 15½ lb., and had one gramme of saccharin (equal in sweetening power to more than 8 oz. of sugar) with his meat. Five hours and a half after the meal the dogs were killed with chloroform, and the contents of the stomach and intestines carefully removed from each animal. The small intestine in each case was empty, except the duodenum which contained a small quantity of digestive mixture that had passed from the stomach; and at the lower end, just above the large intestine, there was material obviously of older duration. In each dog the stomach contained some undigested meat. The dry weight of the contents of the stomach and duodenum of No. 1 dog was 23 grammes, or 33 per cent. of the dry meat taken; whilst the similar dry weight in No. 2 dog (which had taken saccharin) was 21 grammes, or 30 per cent. of the dry meat taken. Obviously, the ingestion of a gramme of saccharin, equal in sweetening power to over 8 oz. of sugar, had not in the least interfered with the gastric digestion of the dog. One of us has, moreover, taken considerable quantities of saccharin daily without experiencing any ill effect. The saccharin used by us was "soluble saccharin," which is equal in power to about nine-tenths of its weight of commercial "pure saccharin." "Soluble saccharine" is as soluble in water as table salt, and when appropriately diluted is perhaps indistinguishable in taste from cane sugar, and is free from all the bitterness of flavour met with in the soluble saccharin first brought into the market.

Summary. — We conclude that (1) saccharin is quite innocuous when taken in quantities largely exceeding what would be taken in any ordinary dietary; (2) saccharin does not interfere with or impede the digestive processes when taken in any practicable quantity; and (3) our personal experience is that saccharin may be taken for an extended period without interfering with the digestive and other bodily functions. Hence there is no reason to think that its continued use is in any way harmful.

Guy's Hospital.

LADY DUFFERIN'S FUND.—It is stated that Lady Lansdowne, on her arrival in India, will take over the presidentship of this fund; and it is expected that, besides the capital, the balance in hand will amount to 30,000 rupees.

A REMARKABLE CASE OF PROBABLY CANCEROUS DISEASE.

BY CHARLES WILLIAMS, L.R.C.P., L.R.C.S., L.S.A.

IN October, 1885, G. T——, a sailor, aged thirty-two years, came to ask my opinion about a wart on his lower lip, in size equal to a small Barcelona nut. He told me that two or three years before he had had a wart in exactly the same place, but that this had been tied, burnt with caustic, and apparently quite got rid of. This new wart, he said, occupied exactly the same situation as the old one, and had been gradually getting larger for some two or three months. I told him that it looked very suspicious, and that I should like to see it again in a week or two's time. As, however, he was leaving for sea the next day this could not be; so, after warning him of its being likely to prove of a cancerous nature, I extracted from him a promise that if it increased in size at all during the next few weeks he would show it to a doctor at the first port his vessel stopped at.

I saw nothing more of the man from this time till March, 1886, when he returned from sea, and again came to my surgery. I was now quite alarmed at the size the wart had attained, as well as the unmistakable character of epithelioma it had put on; therefore, within a few days of his return, I prevailed upon him to allow me to thoroughly excise it. At this operation I was assisted by a neighbouring medical man, and he quite agreed with me as to its indubitably malignant character. This being the case, I was careful to cut quite free of the disease, and, as the ulcerated and indurated mass occupied fully half the surface of the lip, I really excised nearly all of the lower lip. The operation was done with the help of cocaine by the ordinary V-shaped incision, and strong hare-lip pins inserted. He made a very rapid recovery, the lip joined nicely, and nine days afterwards he left for sea again. All went on well, and the reports from him were most encouraging, till January 1887, when, on feeling his throat, he found that a swelling, the shape of an egg, was beginning to make its appearance underneath the chin, and this continued to enlarge and spread to such an extent that when he stood upright the bottom of it touched the top of the sternum. He said that in appearance it still retained the oval shape, and looked exactly like a large egg-shaped bladder. He did nothing to it at all, and, although he suffered very great pain, it was six weeks before he saw a doctor. At the end of this time his vessel touched at Liverpool, and there he went to a doctor's surgery, and had the advantage of seeing two medical men together. After examining the swelling they lanced it, and the man stated that directly they had done so a pint of dark-brown matter escaped. They saw the cicatrix on his lip, and strongly advised him to go into a Liverpool hospital; they also said they were going to test the matter which came out; but as he was determined to return home he left without either going to the hospital or seeing these surgeons again. It was some weeks, however, before he reached home, as his vessel was going from place to place, loading and discharging cargoes on the way. During all this time he was poulticing with linseed meal as directed by the Liverpool surgeons, and the wound was discharging constantly and copiously.

This was its condition, then, on May 5th 1888, when he arrived home and came to show himself to me at my surgery: a large gaping wound, with well-marked induration around, and offensive matter coming in large quantities from the opening. As I had not seen the patient since the removal of the lip, which was more than twelve months previously, I feared that I read in this the failure of the operation, that, through having been left too long, the glands of the neck had become infected, and that this was the explanation of his trouble. The history of the onset of this swelling, however, being rather unlike cancer, I told him, in answer to his anxious inquiry, that I was in doubt about its true nature, and that in order to settle it he had better adopt the advice of the Liverpool surgeons and go to a large hospital. He fell in with my suggestion, and on May 14th last presented himself for admission at the South Devon and East Cornwall Hospital at Plymouth. On the Thursday the visiting surgeons saw it together, and, although they probed it and examined it carefully, he was not able to glean from them what they thought of it. The following Friday he was brought down to the operating theatre, laid on his back on the table, the surgical staff were there ready to operate, and the inhaler was just about to be put to his mouth, when one of the surgeons called attention to the cicatrix on his lip. They asked him about it, a short consultation followed, and the next moment they said "Take him out." They afterwards came into the ward and told him that he must either have the whole of his lower jaw taken away or else nothing at all, and that, as this operation was such a formidable and dangerous one, and would more than probably prove fatal, their advice to him was to let it alone. He decided to take their advice, and came home prepared to die. This, then, was the story of what happened at the hospital as related by him to me on his return, and, seeing that I have often questioned him about it and he has always adhered to his original statements, the facts are probably just as he represented. At all events, on May 24th, he came again to my surgery, having only been discharged that day from the hospital; and as the place looked much worse now even than it did when he went there, and although the poulticing had been discontinued at the hospital and the wound filled with cotton-wool saturated with carbolic acid lotion, the discharge was as offensive in smell and as large in quantity as it was before he left to go there. I now told him for the first time that the balance of probability was in favour of cancer, for, although it did not commence in the usual way, it had latterly come to look very much like it. I cheered him up, however, by telling him there was still a slight doubt, and that I had a genuine doubt is evident from the fact that the following week an effort was made to get him into the Cancer Hospital in London; and, on filling up the form giving particulars of the case, I stated there, I believe, that the diagnosis was not certain. However, as there was no vacancy, he was told that he could not be admitted, and from that day to this he has been under my personal supervision and care; and it is, indeed, the progress of the case from this point onwards that makes it more peculiar than ever.

On May 24th last, then, the man came home, and the wound was dusted with iodoform and carbolic lotion applied. It gradually, however, became worse, and, although on this day and in the following week he came to the surgery to have it dressed, at the end of this time the wound had got so large, and the copious discharge which was incessantly coming from it had so weakened him, that from this time onwards I went to his own home to dress it. At the end of another fortnight his condition was alarming. His face was red, hot, and swollen; the difficulty in swallowing (which up to this point had not been very marked) became worse, and for the first time his breathing was embarrassed. His breathing, indeed, became so bad after a day or two that it could be heard all over the house; and on the night of June 4th, not only was it quick and laboured, but every now and then he would have a spasm of the glottis, which made him turn black in the face and struggle for breath. I visited him two or three times during the evening, and suggested the performance of tracheotomy, saying that it might be the means of prolonging life, which would otherwise be every instant in the greatest peril. On learning that the relief would only be temporary, although I had my instruments ready, and during a paroxysm which seemed as if it would almost certainly suffocate him I strongly advised them not to let him die, they refused to forego their objection, and so I left for the night, never expecting to see him alive again. His father, mother, brothers, and sisters were all round him watching, as they thought, his life ebbing away; whilst, as I went out, his mother thanked me for all my kindness to him, and said, with tears in her eyes, that there was nothing now for her to do but to follow him to his grave.

The next morning I was called out of bed early to another case, and went to the house expecting to hear how he died. Judge of my surprise, therefore, to find that he was not only living but that a distinct improvement had set in. The breathing, which had been so loud and hurried, was now quiet and natural, whilst the alarming spasms of the glottis, which had nearly destroyed him the previous night, no longer harassed him. I learned that, soon after I left the house the previous evening, more than once they had thought he had "gone," and all concerned agreed in the opinion that the change which had taken place in his condition was nothing less than a miracle. To be brief, then, he gradually improved; the breathing became quite

natural, the swallowing easier, and his speech plainer; whilst his tongue, which had been glued down to the floor of his mouth, once more became free. His strength, too, returned, and at the end of a couple of weeks he was able to get downstairs, and shortly afterwards was well enough to go out of doors.

This was his condition in the beginning of July, when, one day, when he was out for a walk, copious bleeding came on, which was repeated every two or three days during the whole of the month. This so weakened him that he took to his bed. He was watched carefully day and night, and it appeared quite certain that if he had another attack he would not survive it. Indeed, we feared every day would be his last. Just as he appeared, however, to be *in extremis* from the loss of blood, and the pain was so severe that he had at last to take as much as two grains of morphia (sometimes twice or thrice repeated in a night before he could get ease), or else have hypodermic injections of a grain at a time, this became subdued, and the discharge lessened in quantity as well as became less offensive in smell (at last, indeed, it ceased altogether, and there was no smell from the wound at all). Moreover, the granulations assumed a healthy appearance, and what had been a large gaping wound capable of admitting all the fingers together, gradually became at the outlet smaller and smaller, till eventually the opening became so closed that there was no possibility of blowing in the iodoform, and so we were obliged to be content with dusting it over the outside. At the same time there was a corresponding improvement in his general condition, and he again surprised the people by once more appearing out of doors.

When his recovery thus seemed really within reach, swelling again took place on each side of his cheek, the pain once more came on, excessive and fetid discharge also made its appearance, and ultimately the wound opened and gaped as much as ever. A medical colleague of age and experience who saw him with me, and has continued to have the charge with myself for the last three months, took it to be malignant from the first day he saw it, and, indeed, had only just before he saw this case attended a patient who had died from apparently the very same thing. I myself, however, still cherished a doubt as to its being cancerous; but two months ago, on the occasion of his third relapse, it put on such a strikingly characteristic cancerous appearance that I was almost forced to agree with him. I doubt very much, if any number of medical men had seen it then, that there would have been a single opposite opinion amongst them. His face was greatly swollen, there was hardness on both sides of the lower jaw, all the teeth of this jaw were loose, and his tongue was very red and so swollen as to fill almost the whole of the cavity of the mouth. But this was not all, for on lifting back his head there was seen a large ghastly-looking cavity, discharging offensive matter and shreds of black slough, hanging down from the roof like icicles in a cavern. Then the discharge was so offensive for some time that, despite the free use of disinfectants, one could hardly stay in the room. Moreover, when we cut off the hanging sloughs on one day, on the next we found fresh ones hanging in the same places.

We now expected a recurrence of the bleeding, and, if there had been, he certainly would not have stood it. Even as it was, the discharge so weakened him that for days he was in a sinking condition, and one night I was sent for, to find him insensible and apparently passing away. His breathing and pulse would both stop for many seconds, and once more I never expected him to last till the morning. He did so, however, and, although his revival only seemed a temporary one, he has gradually got better, and so much so, indeed, the last few days, that at the end of another week I should not be at all surprised if he is not downstairs again.

But what is the appearance of the diseased part now? Well, this is difficult to describe, and I have never lamented my lack of artistic skill in any case as I have done over this. Unfortunately, too, not only am I myself unable to draw, but I can get no one here who can. The consequence is that only an imperfect description can be supplied, but this I will attempt to give as well as I can. The man's condition now, then, is as follows: His face is almost natural, but, on removing the cloth which encircles his head and chin, there is exposed a large, clean-looking wound (for the discharge the last few days has become much less in quantity and less offensive in smell), with what appears to be healthy-looking granulations all around. But what is the mischief that has been wrought? Well, nothing more or less than this: The whole of the submaxillary space is as clearly exposed as if it had been dissected by a skilled pathologist. There in the centre is the pomum Adami, thyroid cartilage, and hyoid bone, easily felt, and covered only by red granulations; whilst on either side are the submaxillary and sublingual glands, seen as plainly and dissected out as neatly as if it had been done for "Gray's Anatomy." Several medical men have now seen this case, several more have heard of it, but what to call it is an enigma. We want to know the meaning of it. Can any of my readers tell us? I may say that to any specialist interested in it and desirous of inspecting this strange case for themselves, I shall be glad if they will put themselves in communication with me to direct them how to get here, and to afford them my hospitality. The case, I believe, is well worth seeing; for every medical man who has seen or heard of it seems to agree in the opinion that it is unique. I will only add that there is no history of scrofula or of syphilis; that the patient has been a sailor, I believe, all his life; and seeing that he has not during all the time he has been under treatment taken anything in the way of medicine but a few bottles of iodide of potash mixture, and five grains of calomel on two occasions, the case is very remarkable, and certainly deserves publishing.

Port Isaac, Cornwall.

ON THE

SURGICAL TREATMENT FOR LACERATIONS OF THE PERINEUM AND THE PELVIC FLOOR.[1]

By DR. WM. H. WATHEN,

PROFESSOR OF GYNÆCOLOGY IN THE KENTUCKY SCHOOL OF MEDICINE, CHAIRMAN OF THE SECTION IN OBSTETRICS AND GYNÆCOLOGY IN THE AMERICAN MEDICAL ASSOCIATION, ETC.

DR. WATHEN spoke especially of the surgical treatment of lacerations or injuries of the muscular and aponeurotic structures that form the floor or diaphragm of the pelvis. He said that there was probably no other subject in gynæcology about which so much had been written that was of no real value, and that a relatively simple operation had been made to appear so complicated that it was seldom correctly performed. He stated that the muscles and the fascia in the perineum gave it strength, and when they were lacerated no operation that did not primarily tend to reunite them was logical, or would be followed by permanent good results. We might have prolapsus of the uterus, with rectocele and cystocele, resulting from subcutaneous rupture of these structures, with no laceration or injury of the mucous membrane or other parts of the perineum. This condition was not usually diagnosed by the attending physician, and the woman was subjected to various plans of treatment to hold the parts in position and relieve the annoyance from pressure, weight, &c., all of which give but little relief; nor could we cure her except by an operation to bring together and reunite the torn ends of the muscles and fascia. For if any of the perineal muscles or the fascia be lacerated, unless at once united and held together, the muscular contractions continued to widen the distance between the torn ends, so that the vulva gradually became enlarged laterally. The extent of this lateral separation was governed by the degree of laceration and the length of time since it occurred. If the above was correct, then no operation would succeed that failed to bring these torn ends together so as to reunite them. This was a simple question that held good in all operations to restore the perineum in complete or incomplete ruptures; and if we were controlled by it, and were familiar with the technique of the operation, success would nearly always crown our efforts. The author did not know of any operation that was not faulty in this particular, but the operations that accomplished this purpose best were those performed by Tait, Duncan, Simpson, Langenbeck, Saenger, Hart, and Barbour; yet, if he understood their methods correctly, they did not fully appreciate the importance of dissecting up and uniting the muscles and fascia.

[1] An abstract of a paper read to the Association of Obstetricians and Gynæcologists at the Congress of Physicians and Surgeons, Washington, D.C., Sept. 18th, 1888.

This could not be done by the usual method of denudation, but was accomplished by a splitting process. The incisions should go deep near the anus on the lateral borders of the vulva, and the recto-vaginal septum should be split through the connective tissue between the vaginal and rectal layers, so that the vaginal flap might be thick enough to prevent sloughing.

Dr. Wathen did not think it necessary to give the reasons why the primary operation should be performed, as there were but few men of recognised ability in obstetrics or gynæcology who were opposed to it, and it was not a little surprising to find in this list the name of the distinguished professor, A. Charpentier, of Paris. His objections were illogical, and were not sustained in actual practice where the operation was correctly done. He (Dr. Wathen) had performed the primary operation often without a failure; in fact, he thought the success was usually more perfect than in the secondary operation. The torn ends of the muscles and fascia were now easily held in apposition, and they united within a few days. He reported a typical case upon whom he operated a few weeks ago for his friend Dr. ——. The woman, when sixteen years old, was delivered of a large child, and the perineum was torn through into the rectum for over an inch; the vaginal wall and the connective tissues were also torn two inches further up. The operation was done about an hour and a half after delivery. He used about fifteen sutures in the vagina and the perineum. The vaginal tear was united by silk sutures, and the perineal by a silver wire and silkworm gut, using only one silver wire as a base suture to hold together the ends of the sphincter muscle. The sanitary and hygienic surroundings were not good, and she had but little after-attention. She passed her urine, the vagina was washed out but a few times, and her bowels moved daily after the second day. At no time was there any pus, and the entire laceration healed by first intention. If the operation was well done, he doubted the necessity of drawing off the urine or tying the legs. Nor was it necessary to wash out the vagina often. The urine and lochia were not poisonous, especially after the second day, if strict asepsis had been observed in the operation. Where any form of an aseptic animal suture was used, the needle should be introduced and brought out just within the lower or external edges of the raw surfaces, so that when they were united the sutures would be concealed or buried in the tissues. Sometimes a few superficial sutures would be required. The sutures should be so introduced as to be entirely covered by the tissues, and to bring the surfaces into even and exact apposition. If the sphincter ani was ruptured, he always used the base suture after the fashion of Emmet. He did not destroy any tissue except jagged edges in some complete ruptures; the dissected part assisted in protecting the wounded surface against the dangers of infection from uterine or vaginal secretions, and also increased the thickness of the perineum. He had never had a recto-vaginal fistula after an operation for complete ruptures, nor did he believe it would often occur if the operation was correctly done after his method.

Louisville, U.S.A.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CASE OF INSANITY FROM OPIUM POISONING.

BY HENRY SUTHERLAND, M.D.

MY objects in publishing the following case are to illustrate, first, the inefficiency of the present laws with respect to the sale of poisonous drugs; secondly, to demonstrate the consequences not only to the patient but to the relatives which may be produced by an abuse of these drugs; and, thirdly, to show how, even in a desperate case, by cutting off the abuse of opium, complete recovery may ensue.

Mrs. E——, aged fifty, was admitted to Otto House on Aug. 16th, 1888. First attack; duration five days. Twenty years ago the patient had acute albuminuria, which gave her much pain, and first induced her to take opiates as sedatives. This habit continued, and increased gradually till the whole moral character appeared to be undermined. The patient, who had been previously most accurate about money matters, became not only careless, but reckless and dishonourable. She ultimately on several occasions forged the name of her daughter, who had funds invested in safe railway companies, for transfer of the stock into various risky investments, which have since turned out complete failures. She has gambled inordinately on the Stock Exchange, her liabilities at one time amounting to not less than a million of money. The relatives, after having endured all the inconveniences of a borderland case for six years, were at length able, five days only before admission, to place her under certificates and proper control. First, with regard to the sale of poisonous drugs, the chemists' bills were produced. From one of them (name carefully noted) it was ascertained that intermittently for six years past the patient had bought and taken three drachms of laudanum and two morphia pills, each pill containing one grain of morphia, equal to two grains of opium, a day. Say, forty minims of laudanum contain one grain of opium, then three drachms would contain six grains, which added to the morphia pills would amount to eight grains a day. But, in addition, another chemist supplied a similar quantity, which the relatives had every reason to believe was also taken during the day. The patient consequently had consumed habitually not less than sixteen grains of opium during the day intermittently for six years. After losing flesh gradually from the anorexia produced by the opium habit, and having bored her relatives by her eccentricities for some months, she became suddenly acutely delirious, dashing her limbs about in an aimless manner, and behaving with violence to all who approached her. She had the delusions that she was going to be poisoned, that red-hot irons were placed in her bed, and that she had been bitten by a dog, with many others. She had lain in bed for six weeks previously to the attack for no reason whatever. During the first ten days—from Aug. 16th to the 26th—the pulse was so feeble that although the patient slept only from half an hour to three hours every night, it was not deemed advisable to administer any sedative. On the 26th a marked improvement took place, owing entirely to the fact that the patient had taken food well as soon as the opium had been cut off. The pulse became stronger and more normal, and chloral, morphia, bromide, and ultimately paraldehyde, were given in succession with great caution, until on Sept. 10th six hours' sleep were registered. From that time till Oct. 8th she gradually improved, and was discharged on that day, on leave of absence, "relieved."

The moral of the story is that the present system of allowing patients day after day to buy at a chemist's shop extraordinary quantities of sedatives for their own use, or for any other purpose, is a disgrace to our Legislature, and that stringent measures ought to be at once taken to rectify or enforce any law which may exist on the subject.

Richmond-terrace, S.W.

ANTIPYRIN IN LARYNGISMUS STRIDULUS.

BY MONTAGU PERCEVAL,
MEDICAL OFFICER, MOUNT BISCHOFF HOSPITAL, WARATAH, TASMANIA.

I HAVE had a series of cases (twenty-four in number) of laryngismus stridulus during April and May of the present year, of reflex origin, due to the sudden changes of temperature to which we are liable, with cold damp winds. I would wish to record the success I have had in treating these cases with antipyrin.

On the evening of April 4th I was called to see a child, A. N——, aged eighteen months, with the usual symptoms of dyspnœa, with crowing inspirations, accompanied with convulsions. The treatment I then adopted was an emetic of ipecacuanha, to be followed by sedatives and hot flannels applied to the neck and upper part of the chest. The following morning I received a message saying the child was no better, and that the difficulty of breathing had continued through the night. In a case of pertussis, with more than usual irritable cough, which came under my care a few months previously, antipyrin answered extremely well, and it was the benefits which accrued in this case that suggested to me the same treatment. I gave two-grain doses of antipyrin every hour, with the satisfactory result that the difficulty of breathing ceased and the child fell asleep. The same dose was then given every two hours, and the next day the child

was running about well. With all the other cases I had the same result, with the exception of one, a child of four years and a half, in which I had to increase the dose to five grains before the paroxysms ceased. I cannot say whether the same result might be expected in cases due to direct or centric irritation, but I should undoubtedly give it a trial.

Tasmania.

CASE OF FŒTAL MALFORMATION.

By WM. HARDWICKE, M.D., M.R.C.P.,
MEDICAL OFFICER OF HEALTH, BOROUGH OF HARWICH.

THIS is one of those cases, met with occasionally in midwifery practice, the diagnosis of which in the early stage is most difficult.

MRS. C——, the wife of a publican, had been in labour about four hours with her second child. Being sent for at this period, I made the usual digital examination, and found the os dilating slowly; my finger, however, seemed to pass through the os into space. Thinking it prudent to leave matters to take their natural course for a time, I left her, and on my return in about an hour the os had dilated fairly well, but I could feel in the left sacro-iliac region the sharp serrated edge of a bony prominence, and could pass my finger round as one would if a basin were inverted. In course of time, as this descended, as it now did, I could distinctly trace the nose and the hollows of the eyes, but could find nothing to correspond with the usual convexity of the orbital bones above. I was very much puzzled. The face continued to descend by the natural expulsive efforts of the uterus, the mass occupying the left oblique diameter of the pelvis, and now the bony ridge could be traced more distinctly. It became evident to me that this was a case of monstrosity, which was proved almost immediately by the appearance at the vulva of the face, minus the cerebrum with its skull-cap; the body soon followed, and was well formed. On examining the head after birth, the parietal and frontal bones were found to be entirely absent, as also was the cerebrum; the occipital bone was apparently complete. In the basin of the calvaria was found the smooth surface of what appeared to be the dura mater, covering the inner surface of the bones, cerebellum, pons Varolii, and orbits, the eyes being beneath in their normal positions. Owing to the objection of the friends, I was unable to obtain any detailed investigation of the parts by dissection. It may be worthy of notice that MRS. C—— had been married six years, and had had only one child four years previously; no miscarriages, and no history of syphilis on either side. The mother made a good recovery, apparently none the worse for the passage of the rough and jagged cranial bones along the vaginal passage.

Dovercourt.

FAILURE OF LOCAL ACTION OF CANTHARIDES IN URTICARIA.

By TOM ROBINSON, M.D.

MRS. Y——, aged sixty-three, gives the following history: "I have been subject to nettle-rash for twenty years. The rash comes out at all times of the day and at all periods of the year. I am not able to say what kind of food produces it. Last night I had eaten tomatoes and a chop, and about two hours afterwards I came out in a copious crop of the rash. It was a hot night, and the irritation was most intense. Having some vinegar of cantharides in the house, I sponged it freely over my belly, where the eruption was the most obvious, and I think it did good. But the hand which I used is blistered."

On examination I found her to be a healthy woman who had lost all her teeth and had a fern-leaved tongue. The abdomen was in a normal condition, but the right hand had several blebs running chiefly on the inner surfaces of the fingers.

Remarks.—This case is interesting, as showing that a portion of the cutaneous surface which is in an urticarious state is not influenced by cantharides; it also shows that another and an unaffected part of the surface of the body is irritated and blistered by the same application. In other words, it is an example of Hunter's law, that two morbid conditions cannot be in action in the same spot at the same time. It is also a good example of chronic relapsing urticaria, one of the most rebellious of our cutaneous affections. I may add that this patient derived the greatest comfort from using a spray composed of spirit of wine, chloroform, and carbolic acid.

Princes-street, Cavendish-square, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. THOMAS'S HOSPITAL.

TWO CASES OF INJURY TO THE CERVICAL REGION, FOLLOWED BY BRACHIAL PARAPLEGIA; RECOVERY; REMARKS.

(Under the care of Mr. CLUTTON and Mr. MAKINS.)

EXAMPLES of paralysis of the nerves of the arms *only*, after an injury to the cervical spine, without any paralysis of the nerves below those entering into the formation of the brachial plexus, are rarely met with. Such a condition, in the absence of any evidence of injury to the bones, may depend upon hæmorrhage into the vertebral canal,[1] or upon a localised inflammation of the membranes of the cord,[2] the diagnosis depending upon the time which intervenes between the injury and the onset of the paralysis. Mr. Erichsen[3] says: "When the lower part of the cervical spine has been struck so as to concuss the cord, I have known paralysis of one or both arms induced, without any paralytic symptoms of the trunk or legs"; it is not quite clear, however, that intra-spinal hæmorrhage is not included by this statement. The symptoms which followed the injuries and the after progress of the two cases were so similar that Mr. Clutton's explanation of hæmorrhage with regard to position and extent may be applied to both of them. For the account of the following cases we are indebted to Mr. E. Solley, surgical registrar.

CASE 1. (Under the care of Mr. Clutton.)—J. W——, aged forty-one, a labourer, was admitted into the Edward ward on Aug. 15th, 1888. Family and previous history unimportant. On the day of admission, while employed as a builder's labourer, he was struck on the left side of the head, the left side of the neck, and the left thigh by a falling scaffold-pole. He was rendered unconscious for seven or eight minutes.

When brought to the hospital about half an hour after the accident he was quite conscious, but somewhat drowsy. There was no bleeding from the nose or ears, and no subconjunctival ecchymosis. There was very slight bleeding from the mouth, apparently from a small laceration of the tongue. There was no apparent injury to the scalp. No irregularity or tenderness was discovered in any part of the spine, the cervical vertebræ being freely movable and normal in every respect. Just in front of the transverse processes on the left side of the neck there was deep-seated tenderness, but no obvious swelling. There was no sign of any bruise. Pupils were equal, and acted to light, though sluggishly; size about 4 mm. Pulse 61, small. There was loss of power in both arms, so that he could not raise them from the bed; but he could move the fingers of both hands, especially the right. There were tingling sensations in both arms from the fingers to the shoulders, with distinct though not absolute anæsthesia. No loss of power was detected in the trunk or lower extremities, but a tingling sensation was complained of in the left leg.

Aug. 16th.—Still somewhat drowsy, but quite intelligent; complaining of tenderness and pain in the left shoulder and arm, hyperæsthesia being especially marked over the brachial plexus and the shoulder joint, though present down the whole length of the limb. There is slight hyperæsthesia and tingling in the right arm, less prononnced than in the left. Marked weakness of both arms, but especially of the left,

[1] Holmes' System of Surgery, vol. i., p. 690. [2] Ibid., vol. i., p. 702.
[3] Science and Art of Surgery, vol. i., p. 793.

the loss of power being absolute in all the muscles of the left shoulder and arm, the fingers alone showing any power of movement, and that very feebly. No loss of power in the lower extremities, but some weakness of the back complained of, and pain on moving the neck. No affection of sphincters. Pupils normal. Temperature 100°. Pulse 61, fairly full. Urine acid; no albumen.

21st.—Tingling and hyperæsthesia less marked. Some improvement in motor power of the right arm, especially in the flexors of the forearm, wrist, and fingers. No improvement in the left arm. Grasp of hands, as measured by dynamometer: right hand, 15 lb.; left, 8 lb. Temperature normal.

23rd.—Slight improvement in motor power. Grasp of right hand, 18½ lb.; left, 10 lb. No wasting of muscles detected. Still some tingling in both arms, especially the left; and hyperæsthesia over the left shoulder joint and supraclavicular region.

24th.—A blister was applied to the left side of the neck and shoulder over the region of the brachial plexus.

27th.—Distinct increase of motor power, especially in the right arm, with which he can now feed himself. Grasp of right hand, 25 lb.; left, 15 lb. Can now raise the left hand and forearm slightly from the bed. Less pain in the shoulder. No hyperæsthesia.

31st.—Grasp of right hand, 30 lb.; left, 18 lb. Still has some tingling in both arms on attempting to move them, most marked in the left. Still some weakness of back, so that he cannot sit up in bed unsupported.

Sept. 3rd.—Grasp of right hand, 32 lb.; left, 15 lb. Right arm stronger, but left apparently weaker than when last noted. No hyperæsthesia. Slight pain in the left shoulder when it is moved. Is able to sit up in bed. The muscles of both arms are flaccid and appear to be wasted, as the skin is loose and wrinkled. Circumferential measurement of arms 8 in. above the styloid process of radius: right, 10¼ in.; left, 9¼ in.

10th.—Circumferential measurements the same as on Sept. 3rd. Grasp of right hand, 40 lb.; left, 20 lb. No hyperæsthesia. No tingling sensations, but occasional pains of neuralgic character down both arms, more marked in the left, and never simultaneously in both arms.

11th.—The constant current from twenty cells was applied for ten minutes—the positive pole at the nape of the neck and the negative pole in the left hand; and the interrupted current for ten minutes to the muscles of the arm and forearm, which were very flaccid and certainly wasted.

13th.—General improvement. Battery applied as above-noted daily. Can now lift the left hand to the head. Grasp of right hand, 48 lb.; left, 18 lb. Able to dress himself, and got up for the first time. Subjective sensations as noted above, especially in the left arm; but no tenderness over the shoulder. Some tenderness on pressure over the muscles of both upper extremities, but especially the left. The muscles of the left arm feel very flaccid and wasted, but the circumferential measurements are practically the same as when last noted.

From this date till his discharge on Sept. 16th, the improvement continued steadily. He was ordered to attend as an out-patient.

Remarks by Mr. CLUTTON.—This patient was seen in the out-patient room on Nov. 9th, and was found to have steadily improved. He could raise both arms and perform all the natural movements of which the upper extremities are capable, but on the left side these movements were all distinctly feeble and wanting in power and precision, whilst on the right they appeared to have regained their former condition. The case would appear to be one of hæmorrhage within the vertebral canal, and most probably between the theca and cervical vertebræ. The cord itself must have been uninjured, as conduction was perfect to all parts below the brachial plexus. The absence of any external lesion and the bilateral nature of the paralysis render it extremely probable that the hæmorrhage was within the canal. The diaphragm was unaffected, whilst the shoulder muscles were paralysed, a condition which suggests that the upper limit of the extravasation was between the fourth and fifth cervical vertebræ, and the fingers being movable would, I imagine, place the lower limit at or about the junction of the last cervical with the first dorsal vertebra. It is, I think, unlikely that the hæmorrhage was within the membranes, as such a condition is rare, and would have probably caused compression of the cord itself as well of the nerves given off in that position. The blood would also be more likely to diffuse itself over a larger area. The only symptom of any irritation was the presence of hyperæsthesia over the neck and shoulder and down the left arm. The absence of any post-mortem examination renders the case inconclusive, but the symmetrical character of the paralysis and the patient's recovery make it one of considerable interest.

CASE 2. (Under the care of Mr. Makins.)—J. G. C——, aged forty-seven, a sawdustman, was admitted on Aug. 31st, 1888, into the Clayton ward. Previous history unimportant. While driving with a cartload of sawdust he slipped off the cart, and fell, according to his own account, on to his left shoulder (a man who was with him says he fell on to the top of his head). He was unconscious for a few minutes only, and when brought to the hospital about an hour after the accident was found to be quite conscious; had not vomited, and had no symptoms of cerebral injury, or sign of injury to the cranium or cervical spine. The right pupil was slightly larger than the left, but both acted to light and accommodation. Both arms were paralysed from the shoulder muscles downwards (excepting the pectorals and trapezius), but there was no affection of sensation in either arm. Some tenderness was complained of over the left side of the neck and in the shoulder joint, and pain (subjective) down the arm, but there was no swelling or other sign of local injury, and no affection of legs, trunk muscles, or sphincters.

On Sept. 1st the right arm appeared to have recovered power, being as strong as ever according to the statement of the patient. The left arm could be moved to some extent at the shoulder by action of the pectorals and trapezius muscles, but was completely paralysed below the shoulder joint, no particular groups of muscles being singled out. No anæsthesia or hyperæsthesia, but subjective pain from shoulder downward into fingers, most marked when the limb is passively moved. No improvement in motor power took place during the first ten days, and slight wasting of the muscles (estimated by circumferential measurements) occurred, flaccidity being very marked. The wasting appeared not to single out any groups of muscles, but to affect all equally. Subjective sensations of pain were occasionally complained of, especially during the first two or three days. No affection of any other part of the body; temperature normal; general health good. On the tenth day (Sept. 9th) a blister was applied to the left side of the neck, over the region of the brachial plexus. No obvious change was observed till about the eighteenth or nineteenth day, when slight return of power was noticed, first in the flexors of the fingers, then in those of the forearm, and then in the extensors, so that by the twentieth day he could hold the hands out extended at the wrist for a few minutes. On the twentieth day he was discharged to attend as an out-patient, to have the constant current for ten minutes from the nape of the neck to the fingers applied daily, with faradism of the affected muscles. Since leaving the hospital slow improvement has taken place, so that he has now (Nov. 10th) recovered power to a considerable extent in all the muscles except the deltoid, which is still very flaccid and almost powerless. The patient has attended very irregularly, usually only about twice a week, so the regular application of the battery has been impossible.

Remarks.—The above case scarcely requires separate comment, being almost identical with No. 1. The patient in Case 2, as compared with the other man, was markedly inferior, both in mental and bodily activity; this, on the one hand, rendered an investigation of subjective symptoms difficult and unsatisfactory, and, on the other, may have accounted for the slower rate of improvement.

BOLTON INFIRMARY AND DISPENSARY.

CARCINOMA OF GALL BLADDER; NECROPSY; REMARKS.

(Under the care of Mr. GARSTANG.)

THE following case was reported by Dr. Peter Yates.

Thomas N——, aged forty-five years, was admitted on Sept. 18th, 1888, suffering from well-marked icterus and swelling of the abdomen. The following history was adduced. The patient was quite well up to May 1st, when it was noticed by his friends that his skin was becoming yellowish in colour. A local medical man was consulted, and medicine was prescribed. The discolouration, however, gradually got deeper, and two months before admission it

was noticed that his abdomen was gradually swelling. During the whole of this period there was no pain attending either the jaundice or the swelling. Three weeks before admission he first felt pain in the epigastrium, and this had a distinct relation to the ingestion of food, following and remaining for about three hours after eating. The bowels have always been costive. No history of hepatic colic. Previously to the onset of the present illness he had always been a healthy man, except occasionally suffering from "bile in the stomach." Has always been temperate, only taking an occasional glass of beer to meals. No history of syphilis. Family history good.

On admission, the skin and ocular conjunctivæ were intensely yellow, and there was great discomfort from itchiness of the skin. Pulse regular and fairly strong, 64 per minute. Temperature normal. Abdomen ascitic, measuring at the level of the umbilicus thirty-two inches. Liver dulness in right mammary line five inches and a quarter. Palpation of the abdomen was impossible on account of the ascites. No pain or tenderness on pressing over the region of the liver. Heart sounds normal. No abnormal physical signs in chest. The stools clayey, almost white. Urine of a dark reddish-brown colour; sp. gr. 1020; of an acid reaction; no albumen, but giving a well-marked reaction with nitric acid for bile pigments. Calomel and colocynth were ordered as pills to be taken twice a day, and to have a low diet of milk and beef-tea.

Sept. 25th.—Feels better. Pain in epigastrium after food not nearly so frequent or well marked. Abdomen still tense, and the patient complains of considerable amount of flatus after food. Ascites increasing.

Oct. 3rd.—On account of the great increase of the ascitic fluid, which had begun to impede respiration, paracentesis abdominis was performed, about seven pints and a half of deeply stained fluid being withdrawn. On palpating the abdomen almost immediately after the withdrawal of the fluid, the thinned-out border of the left lobe of the liver could be easily felt, but the edge of the right lobe could not be detected beneath the costal margin. On deeply palpating the abdomen in the umbilical and lumbar regions a few indistinct nodular masses could be felt.

Oct. 4th.—Has been much relieved and feels much more comfortable since the tapping. Slept soundly during the night.

5th.—Vomited freely during the night, the vomit being of a darkish-brown colour, with a characteristic "coffee-grounds" appearance. Has also suffered greatly from hiccough, which comes on about ten minutes before the vomiting, after which it disappears. Does not complain of any pain or tenderness. Turpentine capsules were ordered by the mouth, and nutrient enemata every four hours.

6th. The vomiting still continues, preceded by the hiccough, which has become very distressing. Ergotine, hypodermically and as pills, had no effect. Ice was ordered to be constantly sucked, and ice-bags applied to the epigastrium, but without diminution in the vomiting. The vomit examined microscopically was found to be composed of mucus and broken-down and partially digested blood corpuscles, but no sarcinæ.

The patient gradually got weaker from the constant loss of blood and exhaustion from hiccough and vomiting. He died at 7 o'clock next morning.

At the necropsy, made twenty-eight hours after death, a considerable quantity of bile-stained fluid was found in the peritoneal cavity, and scattered freely over the surface of the parietal peritoneum and mesentery were a number of nodular growths about the size of horse-beans. The ascending colon was firmly adherent to the parietes, and underneath the upper part of the duodenum, pylorus, liver, right kidney, and head of the pancreas were all firmly matted together. The gall bladder, owing to this matted condition, could not be made out at all, but, on section of the whole mass, a cavity, which represented the gall bladder, was found, filled with twenty-six small irregular gall stones, varying in size from a lentil to a split pea. There was also contained in this cavity a considerable quantity of thick pale mucus. In the duct beyond was found a much larger gall stone, tightly impacted, and surrounding this a mass of new growth, binding down all the surrounding organs. The liver tissue was apparently healthy, but deeply discoloured, all the bile ducts being much dilated. Scattered throughout the substance of the liver were a number of small nodular growths, especially on its upper surface, and the diaphragmatic peritoneum was also freely studded with similar growths. The kidneys were considerably disorganised, the cortex being much thickened, and the Malphigian pyramids contracted. The new growth had involved the fat at the back of the right kidney, which was adherent to the capsule. The body of the pancreas was healthy, but the head was involved in the growth. The stomach and duodenum were congested, but no ulceration or ruptured vessel could be discovered. The pylorus was very little, if at all, constricted although surrounded by the growth. Other organs healthy. Portions of the above growths were sectionised, and found, under the microscope, to be carcinoma of a scirrhous nature. The liver in the neighbourhood of the gall bladder was gradually becoming invaded, as also the capsule of the right kidney.

Remarks.—Primary carcinoma of the gall ducts and gall bladder is sometimes met with, but the point of interest in this case is the probable determining cause of the growth. The impaction of the large gall stone in the commencement of the common bile duct most likely in the first place set up a simple inflammatory process, which afterwards took on a cancerous action, rapidly growing and involving the neighbouring organs. Other points of interest are the absence during life of any symptoms of impaction, there being no hepatic colic, and the rapidity of the case to a fatal termination from the onset of the symptoms.

KASHMIR MISSION HOSPITAL.

ABDOMINAL CASES.

(Under the care of Mr. A. NEVE and Dr. E. F. NEVE.)

CASE 1. *Ovarian cyst; ovariotomy; recovery.*—R——, aged about thirty-five, with typical ovarian tumour physiognomy. The swelling was first observed ten months previously to admission. The abdomen was very large, measuring thirty-eight inches in circumference, and was entirely filled by a regular, fluctuating tumour, not movable. Diagnosis: a cyst, chiefly unilocular, of left ovary.

Operation.—Chloroform having been administered, a four-inch incision was made, the omental adhesions were separated and ligatured, and the cyst was tapped. No more adhesions being found, the tumour was drawn out. The pedicle, which was long and not thick, was ligatured after transfixion, and each half tied, with one encircling knot added. The abdomen was then irrigated with warm water which had been previously boiled. A little oozing took place apparently from the omentum. The pelvis was sponged till dry, a glass drainage tube inserted, and stitched with silk in the usual manner. Examination of the tumour showed it to be a multilocular cyst with very varied contents. The evening temperature was 101·3°; after this convalescence was afebrile.

The discharge was for two days blood stained; on the third day it was clear, and only a teaspoonful in amount. On the fourth evening the tube was removed. The first dressing was on the seventh day, when the wound was found healed and the stitches were removed. For several days there were a few drops of discharge from the sinus left after the removal of the drainage tube. At the end of the third week she sat up, and was out. She went home on the twenty-sixth day, looking years younger than before the operation.

Remarks by Mr. A. NEVE.—The preparations for the operation were those of strict Listerism, the operation itself being aseptic rather than antiseptic. The drainage tube did no harm, and may have been useful. I was much indebted to Miss L. Butler, who superintended the nursing, and assisted in the operation.

CASE 2. *Suppurating ovarian cyst; tapping; injection; cure.*—The patient, a well-to-do woman, had a tumour filling the left side of the pelvis, projecting to the level of the umbilicus. It was noticed three months previously; latterly it had been painful, and she was getting weak. Diagnosis: probably an ovarian cyst.

Treatment.—An exploratory incision or any attempt to excise was refused by the friends. On aspirating, some very fetid pus was withdrawn, but the tumour was only reduced by one-half. At intervals of a fortnight four aspirations were performed; after each it rapidly refilled. A small incision was made, and the peritoneal surface at the seat of the punctures exposed and allowed to granulate for a week; the cyst was again aspirated and one drachm of pure carbolic iodine injected. There was pain for a few days. The tumour then began to diminish, and the patient six months later was quite well.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Arthrectomy.

AN ordinary meeting of this society was held on November 13th, the President, Sir Edward Sieveking, being in the chair.

A paper was read by Mr. EDMUND OWEN on Arthrectomy, or Erasion of Joints, of which the following is an abstract. Though the operation of scraping a diseased tissue was not a new procedure, yet its adoption in the treatment of pulpy or of chronic suppurative disease of a joint was of comparatively recent date. The first account of it and the success which attended it was by Mr. Wright, surgeon to the Children's Hospital, Manchester. It appeared in THE LANCET of 1881. This he supplemented by a review of sixteen cases of arthrectomy in the *Medical Chronicle* of July, 1885. The construction of the hip joint rendered it unsuited for treatment by arthrectomy in chronic disease, but as a supplementary measure to resection of the head of the femur it was likely to prove of great value. The epiphyses might often escape mutilation whilst the whole of the pulpy synovial membrane and all other diseased tissue were cleared out of the articulation. The cartilage joining the epiphysis with the shaft was neither disturbed nor trenched upon, and thus the risk of the patient recovering with a greatly shortened limb was obviated. Indeed, it was even possible that the patient might recover not only with a limb of normal length, but with a joint in which the movements were but little if at all interfered with. Such a result, however, was neither to be expected nor aimed at. After the operation the limb was to be kept absolutely stiff and fixed in splints for many months, and if at the end of that time a certain range of movement were discovered the joint might be left to shake itself free, no manipulations being resorted to. In all probability the knee would be synostosed and straight. In the case of pulpy or chronic suppurative disease of the knee joint the operation was admirably adapted, provided that the disease was not too far advanced so that the bones were extensively implicated, and that the patient was the subject neither of general tuberculosis nor of albuminoid degeneration. In short, arthrectomy was the proper operation in most of those cases in which resection had hitherto been performed. Over resection it held this great advantage, that it took away from the articular surfaces only such tissues as were actually diseased. On several occasions it had been noticed that after the joint had been thus thoroughly cleared of elements which were of a diseased or suspicious nature the health of the patient had shown an immediate and marked improvement, appetite and general health altering for the better, and permanent convalescence being at once established. Speculations were made upon the possible influence of the bacilli tuberculosis. The improvement which followed upon the clearing out of all the diseased tissues was as notable as that which often followed the amputation of a sarcomatous limb or a scirrhous mamma.

Mr. BRYANT said that the paper suggested, if it did not demonstrate, that there was a procedure which was less severe and gave results as good as excision. The operation was based upon a principle not altogether unknown to surgeons: that the operator should simply remove diseased structures. He had applied this principle when adopting surgical measures during the last twenty-five years, and the method much as now used was discussed and set aside in the early days of operations on joints. The early resectors said the whole joint should be taken away, and they, for this reason, looked doubtfully on the operation when applied to the hip and humerus, but praised it for the elbow and knee. In 1866 he had several knee cases—chronic suppurative disease,—and he laid the joint open, removed diseased tissues, and fixed the limb on splints; he could not remember having had a failure. In one instance he took away the diseased head and neck of a radius, in another the head only of a tibia, his rule being to remove only the morbid tissue, leaving the healthy parts alone. Fergusson used to state that resection for pulpy disease was not advisable; the joint was left till completely disorganised, and then amputation was performed. He did not regard the bacilli as the active cause; he looked upon them merely as a result or complication of the process. With regard to the stage in which this operation was advisable, in early cases he thought natural processes alone could bring about a cure, whilst with extensive disorganisation amputation would be necessary; he would recommend it in those cases where the disease was moderately advanced, but he was not sure whether he would deal with the joint in the heroic manner Mr. Owen had described.

Mr. MACNAMARA believed the majority of cases of strumous arthritis commenced in the articular ends of the bone, and he therefore advocated an early incision over the end of the bone and the removal of a crown of trephine over the seat of the epiphysial cartilage. He had done this many times in connexion with disease of the knee, elbow, and ankle, and was convinced of the value and importance of the procedure. It being inapplicable to the hip joint, he advocated Croft's plan of early excision, after-rest in all cases being secured by a plaster-of-Paris bandage.

Mr. BARWELL defended the operation of excision as at present practised, the diseased synovial tissue being trimmed away. All the degenerated tissue could not be removed in many cases, despite most careful erasion; many sinuses extending into intermuscular planes and lined with pulpy tissue being unapproachable. It would be rash to suppose that one particular mode of operation would suit every form of disease.

Mr. R. W. PARKER regarded the measure as much preferable to excision in young children; he thought those cases best suited which had neither bone disease nor sinuses. He objected to removing the crucial ligaments in knee cases, as they could be easily pared of their lining membrane, and their absence removed much support to the bones. He believed the inflamed synovial tissue contained the real elements of the disease, and it therefore should be thoroughly removed.

Mr. WARRINGTON HAWARD exhibited for Mr. Page a patient on whom two years previously arthrectomy had been successfully performed. Erasion was thoroughly carried out, and a portion of one of the femoral condyles required removal in order to obtain a straight limb.

Mr. OWEN, in reply, said he had found the operation especially applicable to joint disease with bone complication; the cases selected should be those in an intermediate stage of the disease. Mr. Keetley had stated that the bacilli would die if the parts were kept at rest, and this would explain the recovery of the early cases without operation and by fixation alone. He was beginning to think that in a considerable number of cases the disease began in the bone. He found it impossible to thoroughly clear the back of the knee joint unless the crucial ligaments were divided, and, as a fixed joint was to be hoped for rather than imperfect movement, their destruction was not of much moment.

CLINICAL SOCIETY OF LONDON.

Encysted Calculi.—Paralytic Rabies.

AN ordinary meeting of this Society was held on the 10th inst., Dr. W. H. Broadbent, F.R.C.P., President, in the chair.

A very large audience listened attentively to the reading of the papers and to the discussions which followed them.

Mr. E. H. FENWICK contributed a case of Encysted Stone, in which supra-pubic cystotomy was performed, and the stone removed by means of chisel and mallet. The patient had been under the care of Dr. Hine of Leytonstone, and the symptoms had lasted eight years. The calculus could be felt bimanually, and was subsequently discovered to be hour-glass in shape. The smaller piece (1½ oz.) was found projecting into the bladder at the level of the left ureteral orifice, and the larger portion (4½ oz., the size and shape of a large hen's egg) lying in a diverticulum outside the back and base of the bladder. These two portions were connected by a very slender neck. The vesical piece was easily snapped off, leaving the neck protruding from the threepenny-piece-sized orifice of the diverticulum. The position of the opening rendered much dilatation of it dangerous. It was impossible, therefore, to extract the encysted portion entire. Attempts to crush it by means of lithotrite or forceps failed. A chisel was guided through the orifice of the diverticulum and laid upon the stone, elastic counter-pressure being afforded by Petersen's rectal balloon. The calculus was then cut

through by repeated blows with a mallet. After many shiftings of the pieces and sections in every direction, the stone was chiselled into sufficiently small fragments to allow of their being extracted through the orifice. The wound rapidly healed, and the patient left for the country in six weeks without an untoward symptom.

Mr. G. BUCKSTON BROWNE read an account of a case of an Encysted Calculus successfully removed by supra-pubic lithotomy. The patient was a gentleman, aged sixty-eight, seen for the first time last June, with the following history. Lithotrity had been performed five times in less than two years; the first operation was in August, 1886, the last in April, 1888. The earlier operations had given only temporary relief from very distressing symptoms, and the last one had not been followed by any improvement. All the urine was passed by catheter hourly night and day, and there was constantly recurring intense vesical spasm. On sounding the bladder, a stone was detected lying apparently in the floor of the neck of the bladder; it was found very easy to pass over this stone, or rather stony surface, into the vesical cavity which lay beyond, without noticing any calculous matter. The cavity of the bladder was entirely free from stone. Nothing could be felt by rectum, except a moderately enlarged prostate. The history of the case, the feebleness of the patient, and the need for free drainage of the bladder determined the choice of operation, and on July 3rd Mr. Buckston Browne opened the bladder above the pubes. Directly the finger entered the bladder it encountered immediately underneath the opening a stony surface lying level with the surrounding tissues. It was evidently a stone firmly embedded in the floor of the bladder, immediately behind the prostate. The calculus was lifted out by a long and narrow scoop. The finger then passed into a pocket, which went downwards and forwards towards the rectum, and the right forefinger introduced into the rectum was only separated by a thin septum from the left forefinger passed into the vesical pocket. The stone was apparently phosphatic throughout, and weighed a little over a quarter of an ounce. The wound healed in twenty-one days, and the patient went home perfectly well, and able to hold his urine five hours. He continued entirely free from pain for two months, when a slight return of vesical spasm was complained of. This was found to be due to a small phosphatic concretion, which was removed by lithotrity. During the operation the patient coughed violently, and the concretion was entirely lost, and was not recovered until the bladder behind the prostate had been firmly pressed upon by the finger in the rectum. At the present moment the patient is perfectly well. The interest of the case lay in the fact that it illustrated a condition of vesical calculus where lithotrity was powerless, and perineal lithotomy fraught with mechanical difficulties which might easily prove insurmountable, while all difficulties vanish if the bladder is opened above the pubes.—Mr. CLUTTON mentioned the case of a man, aged forty-one, who for fifteen or sixteen years had been the subject of stone. The stone could be felt on one side and anteriorly, and was two inches in diameter. He determined to attempt lithotrity, and to perform lithotomy should that not prove successful. He managed to seize the calculus with the lithotrite, but could not move it. He therefore performed the suprapubic operation, and came right upon the stone. It was very hard, with a large centre composed of oxalates. He called particular attention to the fact that this man experienced no symptoms so long as he kept quiet.—Mr. CHRISTOPHER HEATH remarked on the circumstance that stones were rather more frequently encysted than appeared to be recognised, and doubtless this fact explained the differences of opinion often existing between two or more surgeons; the truth being that at one examination the stone may be in the bladder and at another in a separate pouch.—Mr. BUCKSTON BROWNE, in reply, endorsed Mr. Heath's views, and he related cases to show how careful we ought to be in asserting that a stone was or was not present after an assertion had been made by another to the contrary effect.

Dr. BRISTOWE and Mr. HORSLEY communicated a case of Paralytic Rabies, in which a patient had been bitten by a rabid cat, and who died of rabies of an extremely paralytic form. The patient was taken ill six weeks after the bite. He was treated locally at the time of the accident, and sent to Paris for treatment by M. Pasteur, but on his return developed symptoms of an obscure kind, suggesting perityphlitis &c. The following day he had pain in the back, and the day after commenced acute ascending paralysis, from which he died within three days. Inoculation from his spinal cord proved that the disease was rabies. Further researches and experiments were described in the paper, from which it appeared that the virus of the rabid cat was especially virulent, the incubation period showing that its latency (under these circumstances) was as short as that of a pure virus isolated by M. Pasteur. The probability that Landry's paralysis was in some instances paralytic rabies, and that idiopathic myelitis was also an acute specific disease was strongly suggested.—Dr. BROADBENT said that the great question was whether this form of paralytic rabies was due to the bite or to the inoculations, or whether the acute ascending paralysis was to be looked upon as a form of Landry's paralysis.—Dr. ANGEL MONEY thought that the development of the disease in the case read may have deviated from the usual type found in man as the result of alterations in the state of the nervous system due to alcohol and cold. He said no one had yet explained the reason why the virus selected certain parts of the nervous system on which it threw its chief stress.—A MEMBER asked why, in the case read, notwithstanding treatment by Pasteur's method, the patient died.—Dr. HALE WHITE remarked that the microscopic sections exhibited changes exactly like those found in ordinary rabies. The rash of rabies came out in the nervous system just as did that of scarlet fever in the skin.—Mr. T. SMITH asked what further evidence had been accumulated as to the value of Pasteur's method.—Dr. BROADBENT related a case of hydrophobia in a boy which recovered under the use of chloral. He also mentioned the case of a young lady in whom no history of a bite by a rabid animal could be obtained. In the cases of Landry's paralysis the symptoms were usually very different from those noted in ordinary hydrophobia.—Mr. VICTOR HORSLEY, in reply, said that it was agreed that no harm resulted from the so-called "non-virulent" inoculations of M. Pasteur. He believed also that in man and dog the evidence went to show that inoculations with virulent material of rabbits' cords led to no result if the man and dog had been previously subjected to the less intense forms of inoculations. The average mortality from street rabies in the "home of rabies" (Lancashire) was 16 per cent., whereas Pasteur's percentage was a little over 2 per cent. in those cases where it had been proved by inoculation experiments that the animal which had inflicted the wound was really rabid. Pasteur distinguished three classes of cases. The first consisted of those in which experimental proof was obtained of the animal having been rabid; the second, of those cases in which the bite was certified by a veterinary surgeon to have been made by a rabid animal, but no experimental proof existed; the third comprised cases in which it is doubtful whether the animal was rabid, or whether the patients were anxious and terrified. Mention was made of the case of a boy who had been bitten by a rabid dog. The boy took scarlet fever, and whilst recovering from it the symptoms of well-marked and fatal hydrophobia developed. This example of the concurrence in the same system of scarlet fever and the poison of rabies was almost unique. He was inclined to accept the view that the nervous system was selected as the seat of the rash of rabies just as scarlet fever selected the skin. Caution should be exercised in accepting the statement of patients that they had never been bitten by a rabid animal. In the recent Salisbury case, alleged to be one of spontaneous hydrophobia, it was found that the man had been bitten two years before whilst he was in a state of unconsciousness from drink. In reply to the question why Pasteur's treatment failed to prevent hydrophobia in the case read, Mr. Horsley said that some individuals could not be protected by any number of inoculations, just as some animals could not. At the same time, it must be remarked that in the case in point the man had not been fully treated on the most approved methods, partly because of his own neglect, partly because it had only recently been discovered that the bite of a rabid cat required larger quantities of protective material than the bite of a rabid dog. References were made to recent work published in the Parisian *Annales*.

The following living specimens were shown:—

Dr. PRINGLE: Xeroderma Pigmentosum in a girl aged seven.

Mr. GODLEE: A case of Deformity of the Leg.

Mr. B. ROTH: Scrofulous Disease of Ankle Joint Treated by Thomas's Method.

OPHTHALMOLOGICAL SOCIETY.

Congenital Lateral Deviation of the Eyes.—The Ciliary Processes and Suspensory Ligament.—A Point in connexion with Retinal Hæmorrhage.—Prince's Operation.

AN ordinary meeting of this Society was held on Nov. 8th, Mr. J. W. Hulke, F.R.S., President, in the chair.

Mr. SWANZY of Dublin narrated a case of Conjugate Lateral Deviation of the Eyes, probably due to a congenital lesion. The patient was a healthy child one year old. Both eyes were turned to the right, but could be turned to the left with an effort, yet not as far as the canthi, and when they passed the middle line the effort was attended with nystagmic motions. The associated action of the interni for the purpose of convergence was unimpaired. The vision was good and the ophthalmoscopic appearances normal. After birth, the labour being natural, the child had not opened its eyes for four days, and from that time until it was two months old there was marked nystagmus in all positions of the eyes. From that age the other relatives, including the father, noticed the condition described, but the mother did not do so until the child was six months old, and after it had had a fall on the right side of its head, which produced a bruise. This fall was not followed by any head symptoms. Mr. Swanzy regarded the case as due to an intra-uterine lesion situated in the pons and implicating the nucleus common to the sixth and third nerves on the left side. The symptoms might have been caused by the fall producing a cortical lesion in the right cerebral hemisphere, but experience caused doubt whether a conjugate deviation due to a cortical lesion would be so permanent a symptom, while its permanence as the result of nuclear disease was in consonance with our knowledge of nuclear paralysis in general. The evidence of all the relatives except the mother was in favour of the deviation having been present before the fall. Probably the lesion was at first an irritative one and caused the nystagmus for the first two months, and then it passed on to be destructive, but destructive only in such a degree as to lame without absolutely paralysing the left nuclear centre for the third and sixth nerves. This seemed to be the only recorded case of congenital conjugate lateral deviation.—Mr. DOYNE had seen an almost precisely similar case last year in a boy aged nine. He examined him by test types, and found that he at first looked straight at them, and then gradually turned his head to one side. On close inspection it was seen that nystagmus commenced shortly after the gaze was fixed on the types, and then the head turned to the left, the eyes remaining fixed. He could not obtain any history of injury, and thought the condition was congenital. For the past two years it had been observed that when walking one leg lagged behind, and the two lesions might have some association.—Mr. LAWFORD referred to a case on record which had some bearing on that related by Mr. Swanzy; it was that of a man who all his life had conjugate deviation of the eyes to the right. At the post-mortem it was found that the left internal rectus was absent, the right being exceedingly ill developed. Perhaps a similar condition was present in the case under discussion.

Mr. LANG read a paper on the Ciliary Processes and the Suspensory Ligament, in which he said that with one exception, so far as he had been able to ascertain, all the drawings and descriptions of the zonule of Zinn had been made from prepared specimens. The exception was that of a case recorded in the *Klinische Monatsblätter* (1887, p. 205), by Professor Hjort of Christiania. In that case the iris was completely torn away by an accident, which left an otherwise normal eye, in which the action of myotics on the ciliary processes could be readily observed. Hjort's drawing did not, however, give a representation of the insertion of the suspensory ligament in the capsule, because of the presence of the lens. In the case which he had brought before the Society the lens and iris of the left eye had been completely removed by an accident which the patient sustained eight months previously. The injured eye had become quiet, and presented the following appearance: the lower part of the cornea was quite opaque, and adherent to it posteriorly was a thin membrane, the lens capsule, which contained between its layers some débris of the lens, as well as some proliferating lens fibres, similar to those shown to the Society last session by Mr. Gunn. Behind the periphery of the cornea were seen the ciliary processes, between each of which lay a bundle of fibres. About 1 mm. or 1·25 mm. from the tips of the ciliary processes was seen the margin of the lens capsule. Before reaching the capsule the suspensory ligament was grouped in separate bundles; between each pair of these there was a clear space which gave room for the ciliary muscle. In his patient some of the processes filled these spaces more than others. On reaching the capsule the fibres spread out in a radiating manner for a distance of 2 mm. or 3 mm. from the margin before they were lost to sight. The appearance just described was only seen on looking directly at the eye. On looking obliquely, each bundle of fibres forming the suspensory ligament was seen to consist of many fibres placed behind one another, some being inserted at the back and some in the front of the lens capsule. On applying eserine, and then homatropine, no change could be observed, either in the size or position of the ciliary processes, although the eserine produced its characteristic pain in the eye. This absence of change in the ciliary processes was not to be wondered at, since in all probability it was brought about partially by the lens changing its shape when the ciliary muscles relaxed the ligament, and not entirely by the contraction of the muscles.—Dr. HILL GRIFFITHS considered that Mr. Lang's specimen showed that the suspensory ligament appeared to consist of a set of fibres with spaces between them, and not, as usually described, of a membrane formed of plications of the suspensory ligament. Last year he read before the Society an account of some cases of choroiditis associated with descemetitis, illustrating the permeability of the suspensory ligament. If Mr. Lang's view were correct, that the ligament was a fenestrated structure, the explanation of such cases was easy, as was also the occurrence of nodules in the anterior chamber in cases of glioma.—Mr. BRAILEY referred to a paper that he wrote some time ago, maintaining that the ligament was a series of fibres running from the ciliary processes and from the spaces between them to the lens margin. Behind this there was undoubtedly a continuation forwards of the hyaloid membrane to the posterior aspect of the lens capsule. He had not been able to discover whether the anterior surface of the space was closed by a membrane; if no such membrane existed, there would be no obstruction other than the hyaloid to the passage of fluid from the vitreous to the posterior chamber.—Mr. J. W. HULKE observed that Sir W. Bowman had many years ago described the fibres which formed part of the suspensory ligament. The general belief was that there was an extremely delicate membrane occupying the interstices between the bundles of fibres. If such a membrane did not exist, how was it that the space between the fibres could be injected without the injection fluid escaping?

Mr. LANG then read a communication on a point in connexion with Retinal Hæmorrhage. He remarked that the circular appearance seen in cases of hæmorrhage at the yellow spot was probably due to the hæmorrhage separating the hyaloid from the retina in a centrifugal manner, in the same way as a stone thrown into a pond produced a circular wave. He considered this to be the case, rather than that it should be due to any particular anatomical arrangement of the hyaloid at the yellow spot, since he had seen a similar circular hæmorrhage far forward at the equator of the eye at the temporal side.—Mr. GUNN remarked that if the hæmorrhage were between the vitreous and the retina, it must have detached the hyaloid membrane.

Mr. G. A. BERRY communicated a paper on Prince's Operation for Advancement of the Recti Muscles, in which he advocated certain departures in minor points from the operation as originally described. He used the so-called pulley suture, which was run two or three times out and in over a large extent of the circumcorneal tissue; this suture was thus able to bear a considerable strain, and there was no danger of its cutting its way out. The other suture he used single, and not double, and before introducing the suture he freed the muscle for some distance back, and the muscle was then perforated by the suture further back than the conjunctiva; before the ends of the suture were tied the patient was directed to look at a distant object, so as to produce a slight degree of over-correction. He thought that the advantages of Prince's method over the other operations were: 1. That, as there was only one knot to tie in bringing the muscle forward, it was much easier to regulate at the time the effect required. 2. That it secured an advancement, not only of the direct, but also of the indirect, attachments of the muscle. 3. That it obviated any vertical displacement of the tendon, and that there was

less tendency for the thread to slip through the muscle.—Mr. ADAMS FROST said the object of the double suture was to regulate the amount of correction afterwards; the first, if necessary, being cut through, and the second adjusted as required. It was not inserted double merely in order to be stronger.—Mr. EDGAR BROWNE thought Prince's operation had a tendency to ruck up the muscle, whereas he liked to spread it out as much as possible, and therefore preferred the old double suture, which could be fastened with a bow to facilitate untying; in operating, he took up in the suture not only the tendon, but the other structures thereabout, especially the capsule of Tenon. If the tendon rucked, it gave rise to oblique displacement of the eye, whereas the old suture kept the eye in the horizontal plane, while it could be fastened with a bow to facilitate untying.—Mr. HULKE said the agglutination which took place in the first two or three days would render any loosening or tightening of the suture impossible.—Mr. LANG pointed out that Dr. Prince altered the bow in a few hours, not days, his object being to wait till the muscle had recovered its tone. To avoid rucking, he himself picked up the muscle only and avoided the conjunctiva, transfixing only the subconjunctival tissue; this obviated scarring to a great extent, the conjunctiva being sutured separately. He had found Dr. Prince's form of forceps of great use in keeping the muscle flat during the operation.—Mr. MACKINLAY was satisfied with Prince's operation, though a fault was undoubtedly the rucking. He advocated regulating the suture at the time of the operation.—Mr. SWANZY had done his advancements by Schweigger's method, and was much satisfied with it, but it sometimes produced a swelling close to the cornea, resulting in a red unsightly lump, which did not always disappear.

The following card specimens were shown:—

Mr. FROST: (1) Case of Double Proptosis; (2) Peculiar Changes at Yellow Spot. Mr. LANG: (1) Case of Excision of Corneal Staphyloma; (2) Case of Anophthalmos. Mr. W. J. COLLINS: Section of Melanotic Conjunctiva.

MEDICAL SOCIETY OF LONDON.

Peculiar Case of Ascites.—The Cape Voyage and Climate of South Africa.

AN ordinary meeting of this Society was held on Nov. 12th, Sir William Mac Cormac, President, in the chair.

Dr. GULLIVER communicated a case of Ascites closely simulating Ovarian Tumour, which had been under his care in St. Thomas's Hospital. The patient was a woman aged sixty-three, who was admitted on Aug. 24th, and died on Oct. 4th. There was an obscure previous history of pain in the back and a difficulty in holding urine, but nothing pointing to a true "renal" attack. One month before coming under observation swelling of the abdomen and legs had supervened, together with troublesome vomiting. She was much emaciated when admitted; the abdomen was prominent; there was dulness over the whole front, and slight asymmetrical bulging towards the right side; there was marked resonance on percussion in the left flank, and, though to a less degree, in the right also; there was a fluid thrill, and the thoracic viscera appeared normal. A diagnosis was made of right ovarian cyst. Ten days after admission the abdomen was tapped and eight pints of fluid removed; the latter was in composition consistent with ascites, and had none of the characters of ovarian fluid. After tapping the signs became more unilateral; resonance had reappeared above and on the left side, leaving a dull area over the lower two-thirds of the abdomen on the right side. Later the fluid re-collected and the dulness resumed its original position. She had no signs of obstruction of the bowels, but vomiting persisted and she sank exhausted, her age and the presence of albuminuria preventing operation. At the necropsy, on opening the abdomen, a considerable quantity of ordinary ascitic fluid escaped. The omentum was found very much thickened from chronic inflammation, and was blended with a very thick false membrane, which extended as a continuous sheet across the front of the abdomen from the under surface of the diaphragm to the pubes. On the right side it was continuous with the parietal peritoneum, the latter being also much thickened; on the left it formed a free border, not extending to the parietes, there being in this region many coils of small intestine fastened down by adhesions. The stomach, right kidney, pancreas, and the greater part of the colon and small intestine were covered over by the membrane. The organs were practically normal. What was found at the post-mortem explained many of the symptoms and signs observed during life; the colon on the right side giving relative resonance through the thick omentum, the adherent small intestines gave resonance on the left, whilst the thickened dull mass in the centre had given rise to the idea of ovarian cyst.—The PRESIDENT said the case might have led to a considerable error in treatment if it had been dealt with surgically.—Dr. GULLIVER replied that the patient was considered to be too weak for operation.

Dr. SYMES THOMPSON then read a paper on the Voyage to the Cape and the Climate of South Africa. The first part of the paper showed the facility with which the voyage to the Cape and back could be accomplished in two months during the customary summer holiday; that little discomfort need be anticipated from sea-sickness, and none from excessive heat in the tropics or from the dangers of the deep. Whilst the voyage to Madeira or New York was sufficient for discomfort, it was hardly long enough to do good as a voyage in cases requiring rest or the renovating influences of the sea; whereas the voyage to Australia or New Zealand was apt to prove tedious, and in the last part of the voyage, from Africa to Australia, the winds and low temperature were often found trying or injurious. The advantages of Madeira and of Teneriffe were discussed. St. Helena received a few words of description. The characteristics of the N.E. and S.E. trade winds, of the equatorial currents, and the heat of the tropical zone were given in detail. The cases for which the voyage was recommended were, first, those patients suffering from chest affections, for whom the soothing effect of the warm, moist, tonic air of the ocean was needed, who required rest and quiescence, as contrasted with the class of case specially suited for Alpine winter treatment, in which the great point was to encourage active exertion in a dry, stimulating and very exhilarating atmosphere. In each case much of the benefit was due to the number of hours spent in the open air, in which respect the ocean bore the palm. The author also pointed out details of cases of degenerative disease, dyspepsia, hypochondriasis, and asthma watched by him during his recent voyages. The second part of the paper dealt with the climate of South Africa, which was shown to vary with the elevation above the sea, the coast regions being rather too hot and relaxing, but fairly equable; the middle terrace (elevation from 1500 ft. to 3000 ft.) being dry, bright, clear, and of striking benefit in ordinary cases of phthisis, and the high central plateau (from 3000 ft. to 6000 ft.) still more bracing and invigorating, and of service in cases of pulmonary collapse when dilatation of contracted lung was needed. The great district of the Karoo, comprising the central and northern part of the colony, which has been traversed by the author, was declared to be, so far as climate is concerned, nearly all that could be desired, but until better hotels and boarding houses were provided in suitable localities, until the interests and conveniences of life had increased, and until occupation was provided, it was not possible to commend this region to health-seekers, who had other interests than riding and shooting, or who needed the luxuries of modern civilisation. Details were given of the best health resorts in the Karoo, Tarkastadt, Cradock, and Beaufort West. The high levels of Bechuanaland, now a Crown colony, were regarded as likely in the future to prove invaluable to English colonists and health-seekers. Graham's Town (the Winchester of South Africa) was praised for the excellency of its climate, schools, churches, and society. Natal was spoken of as being specially useful in cases of laryngeal or bronchial irritation, though somewhat too hot and relaxing in ordinary cases of early phthisis. Ceres and the suburbs of Cape Town, in which every comfort, as well as excellent medical and surgical skill are available, were strongly recommended for a few weeks in summer.—Dr. J. A. ROSS, of Cape Colony, said it was recognised that inland altitude, with its accompanying conditions of climate, had a marked effect in restoring vigour, improving sanguinification, &c.; but altitude near the sea coast did not give dryness, for which it was necessary that one or two ranges of mountains should intervene between the sea coast and the inland highlands. The inland plateau selected as a health resort should have mountains in its neighbourhood, not closely or continuously surrounding it. Phthisis was not a rare disease amongst the dwellers on the sea coast, but was so

amongst those dwelling on the inland plateaux. Pulmonary complications after measles &c. were rare up country, where there was considerable but dry cold; not so rare along damp coast lands. Cases of recurring catarrhal pneumonia did best. Phthisis, with laryngeal mischief, was not so favourably affected; persons developing phthisis at the coast were often restored to health by going up country. The characteristics of the climate of Cape inland plateaux were: diathermanous and diaphanous condition of air, great dryness, high electrical condition, heat not continuously great in summer, and cool nights. At Aliwal North (4330 feet above sea level), the mean maximum temperature for the three summer months was 86° F., and the mean minimum temperature for the same three months was 58° F. On no occasion was the air saturated with moisture. Although most rain fell in summer, the air during this time was drier than in winter; the rain fell as thunder showers, cooling and refreshing everything, but not producing continued dampness. Judiciously selected patients might be sent out with advantage to test the climate.—Mr. LENNOX BROWNE showed a series of beautiful water-colour sketches taken whilst on a voyage to the Cape, and remarked on the great intemperance of the lower orders. He dwelt on the advantages of the Natal climate in certain laryngeal affections.—Dr. RUTHERFORD, having lived in the Cape for some years, testified to the value of the eastern provinces for phthisical cases; but he could not recommend the western districts, where sandstorms occurred, living was poor, and sanitary arrangements usually bad.—Dr. THOMPSON, in reply, said that in choosing a locality attention should be paid to the presence of sufficient rain rather than the delights of a small rainfall; the thunderstorms cooled the air and cleared the atmosphere of dust.

OBSTETRICAL SOCIETY OF LONDON.

A MEETING of this Society was held on Wednesday, Nov. 7th, Dr. John Williams, President, in the chair.

Myoma and Fibro-myoma of the Uterus and Allied Tumours of the Ovary.—This communication was read by Mr. ALBAN DORAN. He said myoma of the uterus was very common, fibroma of the ovary rare. The study and comparison of these tumours involved the distinction between true muscle cells and certain cells found in fibrous tissue and in sarcomata. Certain recognised types, such as the plain muscle cells of the walls of bloodvessels, and the muscle cells of the pregnant, non-pregnant, and fœtal uterus, were compared with the cells of tumours evidently made up of fibrous tissue, or evidently sarcomatous, or otherwise malignant. Plain muscle cells, mixed with more or less connective tissue and arranged in bundles, are the chief constituents of the uterine wall, and extend not only to the tube but also to the round ligament and the ovarian ligament—true processes of the uterus. A non-malignant tumour made up of muscle cells very commonly develops in the uterine walls, or may form in one of the uterine processes. This is myoma of the uterus. From the uterine connective tissue white fibre may be developed; hence the origin of fibro-myoma of the uterus. Klebs' and Kleinwächter's theories were discussed. The muscle cells of a myoma are usually larger than those of the uterus in which it grows. Hence in a myoma removed during pregnancy they appear very large. The comparison of the muscle cells with the smaller cells of similar appearance found in the white fibrous tissue in a fibro-myoma is important, especially in relation to suspected cases of myoma of the ovary. The histology of the ovarian stroma in woman, on the other hand, remains very unsettled. Ideas on the subject are too often gleaned from the study of animals' ovaries. Harz's researches show how this study may lead to grave fallacies. The tissue of the hilum and parenchyma was described, and allowance made for changes in the follicles (corpora fibrosa of Patenko, &c.). True fibrous tissue is naturally abundant in the tissue of the hilum (paroöphoron); this fact is enough to account for fibroma of the ovary. Muscular tissue is found amidst the parenchyma of the ovary in the coats of its vessels, and also in free bundles derived from the ovarian ligament—a process of the uterus. The connective tissue of the ovary around the follicles (stroma of the parenchyma, as distinguished from the tissue of the hilum) is variable in character, but, as a rule of a young type. Common changes due to inflammation must be borne in mind. Fibroma of the ovary is a well-known but rather rare disease. Sarcoma of the ovary is not so rare, owing probably to the frequent abundance of "young" connective tissue. Specific spindle cells of a sarcoma were compared with the connective-tissue cells in fibroma. The existence of fibro-myoma of the ovary has been disputed. As muscular tissue naturally exists in the ovary, the development of myoma can be accounted for. The difficulty of distinguishing muscle cells from certain cells in the other tumours described in this paper was admitted, yet by comparing a fibro-myoma of the uterus with a tumour of similar characters growing in the ovary, it appears that this distinction can be made, and hence there is little doubt that a fibro-myoma may develop in the ovary. At least, plain muscle cells, the fusiform cells of fibrous tissue, and the specific spindle cells of a sarcoma may in many cases be distinguished from each other.—Dr. HERMAN observed that Mr. Doran had looked upon Gusserow's aphorism as philosophical rather than scientific. Gusserow had insisted that the more a uterine tumour was a simple hypertrophy of uterine tissue, as in pregnancy, but localised, the more would plain muscle cells predominate. The more fibrous induration of the interstitial connective tissue took a share in the process, the more nearly would the tumour resemble a pure fibroma. Was this aphorism true?—Dr. HORROCKS doubted that the cells could be distinguished from each other in all cases of solid fibroid tumours of the ovary and uterus. Puzzling microscopical appearances were occasioned by the intricate arrangement of the fibres and groups of cells in these tumours.—Dr. W. S. A. GRIFFITH noted how the mixed connective tissue of the normal ovary strongly resembled spindle-celled sarcoma when inspected under the microscope. He asked if what has been described as sarcoma of the ovary was sarcoma at all. It appeared to be rather a general enlargement of the stroma. On account of the doubtful nature of the question, the clinical history of every case of solid ovarian tumour should be carefully noted by pathologists.—Mr. ALBAN DORAN held that Gusserow's aphorism was a self-evident proposition. The smallest interstitial fibroids were the purest fibromata. He agreed with Dr. Horrocks, but he had appealed from the known to the unknown throughout his memoir. He had compared sections of different tumours where the fibres ran in the same direction. In reply to Dr. Griffith, he recognised the resemblance of ovarian connective tissue to spindle-celled sarcoma. He was diffident about the theory that some ovarian tumours were composed of normal but embryonic connective tissue. These tumours were hardly malignant; but a specimen which he exhibited at the Pathological Society in October tended to prove that arrest of development of the connective tissue caused the development of a very malignant growth. Mr. Doran had carefully noted the clinical history of the cases which he described. It was hard to distinguish normal ovarian tissue in adults, owing to the cicatrices of corpora lutea and other sources of confusion.

On Locking, Retroversion, and Strangulation of Uterine Fibroids in the Pelvic Excavation.—Dr. J. MATTHEWS DUNCAN, the author of this paper, stated that locking in the pelvic excavation implied impaction not the result of adhesions. Its effects might be produced by pressure into the pelvic brim of a tumour too large to pass into the excavation. Retroversion of a fibroid closely resembled the retroversion of the gravid uterus in its characteristic form. The symptoms and treatment of the two conditions were nearly alike. Strangulation, with locking, of a fibroid, with or without retroversion, was a rare accident. A case was described. Dr. Duncan had not seen a similar case of strangulation of or by a gravid uterus.

A Case of Locked Fibroid treated by Supra-vaginal Hysterectomy.—Mr. MEREDITH read this case. A single woman, aged thirty-six, was admitted into hospital under Dr. Percy Boulton last May. A uterine tumour was firmly impacted in the pelvic cavity. For nine months the pressure of the growth on the neck of the bladder had led to frequent attacks of complete retention. The recurrence of these attacks had latterly been avoided only by relieving the bladder at regular intervals of not less than two hours, both by night and by day. After unsuccessful attempts to dislodge the tumour from the pelvis by vaginal taxis, the case was transferred to Mr. Meredith's care, with a view to abdominal section. At the operation, performed by him on June 2nd, considerable difficulty was ex-

perienced in extracting the impacted mass, which, together with the uterine body and its appendages, was subsequently removed by a supra-vaginal hysterectomy. The tumour weighed 2 lb., and was the size of a large cocoanut, and consisted of a densely packed mass of fibro-myomatous growths developed in the posterior wall of the uterus. The after-progress of the case was uninterrupted, and the patient made an excellent recovery, leaving the hospital exactly six weeks from the date of operation, with the abdominal incision soundly healed throughout.

In the discussion on the above papers, Dr. GERVIS drew attention to the usefulness of a suitable pessary in preventing a recurrence of the downward displacement of a fibroid after it had been pushed up out of the pelvic cavity. He felt satisfied with hydrostatic pressure in cases where the taxis had failed, noting a case in his own practice resembling Mr. Meredith's.—Dr. GRAILY HEWITT found that upward pressure and properly adapted vaginal support often proved sufficient to relieve impaction. In some cases impaction of a large fibroid was slow to cause difficulty in micturition; in others that trouble rapidly set in when the impacted tumour was small. In a very marked case a fibroid growth at the back of the uterus occasioned sudden impaction, with retroversion and enormous distension of the bladder. Dr. Hewitt thought that cases of anteversion with hypertrophy of the uterus were sometimes mistaken for fibroids. In one instance proper diagnosis and appropriate treatment cured a case of this kind after several years of suffering. In another case, where an egg-shaped tumour grew anteriorly, a little to the right side, a well-adjusted pessary was very successfully used and the tumour raised out of the brim, where its pressure had rendered the patient a complete invalid.—Dr. LEWERS referred to a case where a uterus retroverted by fibroids caused retention of urine, in a woman aged forty-nine. The urine was drawn off, and the uterus replaced bimanually; then a large ring pessary was introduced. This was done two months ago. Dr. Lewers had seen the case recently, and found the uterus in good position; the patient had no trouble with her urine. He mentioned this case because he gathered from Dr. Duncan's paper that, in similar instances, replacement, even when possible, was usually followed by recurrence of the malposition.—Dr. AUST LAWRENCE (Clifton) found that in one case of retroflexed gravid uterus, and in two of "locked fibroids," he was enabled to effect reduction by keeping the patient in bed in the semi-prone posture for twenty-four hours. Without this kind of treatment repeated attempts at replacement should never be made.—Dr. CHAMPNEYS advocated hydrostatic pressure exerted by gravitation. He had found it succeed where taxis had failed, and he always used it after the failure of taxis before proceeding further. The mode of using it had been described in THE LANCET some years back. It was conveniently employed by means of a child's air-ball connected with an irrigator. Any desired amount of even and continuous pressure could be applied and removed at will. A fibroid might be impacted for many reasons—such as bulk, œdema, adhesions, and expansion of the broad ligament. An air-tight adaptation was an obstacle to replacement; in raising a tumour in abdominal section a loud sucking noise was often heard. Hydrostatic pressure got rid of some of the œdema; adhesions could not be rudely torn, as by taxis; and the broad ligaments would be unaffected. Thus the method furnished a valuable differential prognosis as to the possibility of replacement. He did not say that the tumour was replaceable in Mr. Meredith's case, but he should himself have tried hydrostatic pressure before resorting to abdominal section.—Dr. PRIESTLEY remarked that Dr. Duncan's experience proved that, whether the pressure were made with the fingers or with hydrostatic bags, as Dr. Champneys had suggested, and aided by the genu-pectoral position, difficult cases of impacted fibroid might be overcome provided that the pressure was made in the right direction for a sufficient period. Dr. Priestley thought that the alleged frequency of absolute impaction was overrated. The symptoms produced by pressure, almost amounting to impaction, were more frequent; these were retention of urine in certain cases and incontinence of urine in others. He had recently seen a patient who had a bulky fibroid, and was constantly losing large quantities of limpid fluid, supposed at first to be from the uterus, but ultimately proved to come from the bladder. Not only retroversion of a uterus bearing a fibroid could cause impaction, but also some forms of fibroid without backward displacement, particularly those ovoid forms in which the lower segment fitted closely into the brim and cavity of the pelvis. He had sometimes been surprised how small a degree of force exercised in pushing up the tumour from below would bring at least temporary relief. Prolonged and persistent efforts, used with every precaution, should always be made to reduce the tumour, as Dr. Duncan advocated, before so grave a step as abdominal section was undertaken, although Mr. Meredith's case had proved so signally successful.—After some observations in reply by Dr. Matthews Duncan, Mr. MEREDITH stated that the absolute fixation of the pelvic tumour in his case, resisting all the repeated attempts to displace it, afforded ample justification for abdominal section as the only means of relieving the patient. In his case atmospheric pressure had not much to do with the difficulties which he encountered. After partial dislodgment of the firm, incompressible tumour from the pelvic cavity, extraction was found to be impossible until some amount of enucleation had been practised on the left side. This fact alone proved conclusively that nothing short of operation could have proved successful in affording even temporary relief to the patient's sufferings.

The following specimens were exhibited:—

Dr. CULLINGWORTH: Localised Sloughing of Fundus Uteri, due to Acute Septicæmia after Abdominal Section.

Dr. H. SPENCER: (1) Sloughing Fibroid of Uterus; (2) an Anencephalous Monster with Hernia of the Intestines in the Left Loin, and Hernia of the Liver (which presented at birth) in front of the Abdomen.

Dr. WILLIAM DUNCAN: (1) Placenta from a case of Porro's Operation; (2) Ruptured Extra-uterine Fœtation.

HARVEIAN SOCIETY.

Arthrectomy v. *Excision of the Knee.*

A MEETING of this Society was held on Nov. 1st, Mr. L. W. Sedgwick, President, in the chair.

A paper was read by Mr. Page on Arthrectomy *versus* Excision of the Knee, which is printed *in extenso* in another part of our present number.—Mr. EDMUND OWEN remarked that in operating it was necessary to make such an opening into the joint that every synovial crevice could be inspected and thoroughly dealt with; and for this purpose nothing, in his opinion, served better than the horseshoe incision traversing the patellar ligament. In the knees on which he had operated, and which were nearly all in an advanced stage of the disease, he had taken away the crucial ligaments, for only by doing this could one reach that part of the capsule which covered the upper and back part of the condyles. He agreed with Mr. Page that in the present state of knowledge it was better not to think of securing future movement for the joint; that if the surgeon's mind were occupied with such thoughts, he was apt to deal less thoroughly with the articular cavity than he would do if his object were to secure a straight and rigid limb. Certainly to advise that movements be imparted to the joint before healing was complete, as some seemed tempted to do, looked like courting disaster. And not only should the limb be kept rigidly extended for months, or even years if necessary, but the patient should also be under prolonged and careful supervision. The cases which Mr. Page showed were indeed a promising group, and some had borne the test of time extremely well. One must not flatter oneself that because a child goes out of hospital with a straight limb after arthrectomy the case must be written down in the note-book as "cured." Unfortunately this was not so, and his (Mr. Owen's) experience had been that in certain unhappy cases amputation had, after hesitation and regret, to be resorted to at last. The practical surgeon was anxious to know precisely which were the cases best suited for arthrectomy; children with chronic abscess and displacement at the joint, though generally deserving of trial, were those least suited for the procedure. But, on the other hand, if one operated only in the early stages of the disease, there was a risk of resorting to active interference where no such measure was needed. To admit that the slight cases gave the best results was not to pay the highest tribute to the operation; and if arthrectomy were too lavishly resorted to, it would be expedient, or even necessary, to invite the attendance of Mr. H. O. Thomas at

the Society to call attention to the fact that absolute and continuous rest for a joint, together with the adoption of constitutional measures, is a well-tried means of successfully dealing with chronic disease of the knee in children.—Mr. SHEILD agreed with most of the opinions expressed by Mr. Page. Absolute immobility after operation was the main factor in success after either excision or arthrectomy. He had found the actual cautery useful in the treatment of oozing from cavities.—Mr. BARKER hoped that ultimately by means of arthrectomy movable joints might be obtained. However, at present it seemed advisable to keep the limb at rest for a long time. The question of movement seemed to depend upon the choice of cases; in those which now presented themselves movement could not be hoped for. Contrary to the opinion of Mr. Page, suture of the patellar ligament ought to be practised. He has found that shock, due to prolonged operations, was diminished by the use of hot water instead of the ordinary cool carbolic douche, which had also other disadvantages. He himself had been in the habit of performing a modern arthrectomy for fifteen years. He removed a thin layer of bone and cartilage and all the synovial membrane. His actual arthrectomy had given him trouble because of flexion. The whole cartilage and crucial ligaments had not been removed in these cases. It was important to preserve the crucial ligaments unless they were diseased. The tendency to flexion lasted for years. Mr. Page had got the best result in the case in which he had removed cartilages. The other cases still required supports, and he wished to know how this must be continued.—Mr. PAGE replied.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

Rare Abnormality of Aortic Arch.—Angle of Neck with Shaft of Thigh Bone at various Ages.—Nature of Vocal Cords and Hyo-epiglottic Muscle.—Origin of Spinal Nerves in relation to Spines of Vertebræ.

THE annual general meeting of this Society was held in the Library of St. Thomas's Hospital on Nov. 7th, Professor G. M. Humphry, F.R.S., in the chair.

Mr. GORDON BRODIE related a case of Rare Abnormality of the Aortic Arch which had been under his observation. The innominate arteries were absent, being replaced by a short thick trunk, which gave off two branches ascending on either side of the trachea to the place of the common carotids, that on the right giving off one corresponding to the vertebral. Next in order from the arch was the left vertebral, which entered the foramen in the transverse process of the fifth cervical, and gave a branch to the thyroid. Another branch arose from the first part of the subclavian on the left side. The right subclavian arose from the arch as a fourth branch, and passed behind the œsophagus and trachea.

Professor HUMPHRY read a paper on the Angle of the Neck of the Thigh Bone with the Shaft at various Ages and under various circumstances. He gave numerous measurements, from which he deduced the following conclusions:—1. That the angle formed by the neck of the thigh bone with the shaft varies considerably in different persons at the same age. 2. That it is smaller in short bones than in long bones, and that it is usually small when the pelvis is wide, the combination of these two conditions rendering it usually smaller in men than in women. 3. That the angle decreases during the period of growth, before and after birth; but that after growth has been completed it does not usually undergo any change, even if life be prolonged to extreme old age, the commonly received opinion on this point being erroneous. Some change may take place in exceptionally rare cases; but, as a rule, the angle remains the same from the adult period till death, at whatever age that event may occur. 4. That if during growth the limb be relieved of the weight of the body, as in the bedridden state, in paralysis, or after amputation in the thigh, the angle of the neck with the shaft usually retains the open form of early life, or may, and not unfrequently does, become wider.

A paper was read by Mr. BLAND SUTTON on the Nature of the Vocal Cords and the Hyo-epiglottic Muscle, in which facts were adduced in support of the contention (1) that the true vocal cords are the result of the tendinous metamorphosis of a portion of the thyro-arytenoideus muscle; (2) the false vocal cords, with the cuneiform cartilages of Wrisberg, are the degenerate representatives of a piece of cartilage which originally connected the epiglottis with the cornicula laryngis (Santorini's cartilage); (3) that the hyo-epiglottic ligament is the degenerate representative of the hyo-epiglottic muscle so largely developed in whales, horses, ant-eaters, many monkeys, and other mammals, sometimes even reappearing in man. The demonstration was aided by actual dissections, prepared by Mr. William Pearson for preservation in the museum, at the suggestion of Professor Stewart. The paper concerned itself with actual questions of facts, and speculation was studiously avoided.

Mr. R. W. REID then read a paper on the Relations between the Superficial Origins of the Spinal Nerves from the Spinal Cord and the Spinous Processes of the Vertebræ. Owing to the present somewhat insufficient data afforded concerning the exact position in the adult of the superficial origin of the spinal nerves from the cord in relation to the surface of the body, he made a series of six dissections to try to localise their position more positively. He said that although the length and obliquity of the spinous processes varied a good deal, yet their posterior extremities might fairly be made use of for the purpose. From examination of a number of cords, he found that for all practical purposes the posterior roots and the anterior roots of nerves belonging to the same segment left the cord at the same level. He then described the method in which the investigations were conducted—firstly when the body was placed in the horizontal, and secondly in the upright position. These investigations were conducted with mathematical accuracy, and the result arrived at was that the superficial origin of any individual spinal nerve has no fixed and definite relation to the apex of one or the apices of two spinous processes or the space intervening between two, as might be supposed from the tables of Nuhn and Jadlot, but that its position varies considerably. The following is a summary of the limits within which he found that the posterior and anterior nerve roots took their superficial origins from the cord in relation to the posterior ends of the spinous processes. (*a* signifies the highest point of origin; *b* the lowest point of origin.) Second cervical: (*a*) a little above the posterior arch of atlas; (*b*) midway between the posterior arch of atlas and the spine of axis. Third cervical: (*a*) a little below posterior arch of atlas; (*b*) junction of upper two-thirds with lower third of spine of axis. Fourth cervical: (*a*) just below upper border of spine of axis; (*b*) middle of spine of third cervical. Fifth cervical: (*a*) just below lower border of spine of axis; (*b*) just below lower border of spine of fourth cervical. Sixth cervical: (*a*) lower border of spine of third cervical; (*b*) lower border of spine of fifth cervical. Seventh cervical: (*a*) just below upper border of spine of fourth cervical; (*b*) just above lower border of spine of sixth cervical. Eighth cervical: (*a*) upper border of spine of fifth cervical; (*b*) upper border of spine of seventh cervical. First dorsal: (*a*) middle of interval between spines of fifth and sixth cervical; (*b*) just above spine of first dorsal. Second dorsal: (*a*) lower border of sixth cervical; (*b*) just above lower border of spine of first dorsal. Third dorsal: (*a*) middle of spine of seventh cervical; (*b*) lower border of spine of second dorsal. Fourth dorsal: (*a*) just below upper border of spine of first dorsal; (*b*) junction of upper third and lower two-thirds of spine of third dorsal. Fifth dorsal: (*a*) upper border of spine of second dorsal; (*b*) junction of upper fourth and lower three-fourths of spine of fourth dorsal. Sixth dorsal: (*a*) lower border of spine of second dorsal; (*b*) just below upper border of spine of fifth dorsal. Seventh dorsal: (*a*) junction of upper third and lower two-thirds of spine of fourth dorsal; (*b*) just above lower border of spine of fifth dorsal. Eighth dorsal: (*a*) junction of upper two-thirds and lower third of interval between spines of fourth and fifth dorsal; (*b*) junction of upper fourth and lower three-fourths of spine of sixth dorsal. Ninth dorsal: (*a*) middle of interval between spines of fifth and sixth dorsal; (*b*) upper border of spine of seventh dorsal. Tenth dorsal: (*a*) middle of interval between spines of sixth and seventh dorsal; (*b*) middle of spine of eighth dorsal. Eleventh dorsal: (*a*) junction of upper three-fourths and lower fourth of spine of seventh dorsal; (*b*) just above spine of ninth dorsal. Twelfth dorsal: (*a*) junction of upper fourth and lower three-fourths of spine of eighth dorsal; (*b*, just below spine of ninth dorsal. First lumbar: (*a*) middle of interval between spines of eighth and ninth dorsal; (*b*) lower border of spine

of tenth dorsal. Second lumbar: (*a*) middle of spine of ninth dorsal; (*b*) junction of upper third and lower two-thirds of spine of eleventh dorsal. Third lumbar: (*a*) middle of spine of tenth dorsal; (*b*) just below spine of eleventh dorsal. Fourth lumbar: (*a*) just below spine of tenth dorsal; (*b*) junction of upper third and lower two-thirds of spine of twelfth dorsal. Fifth lumbar: (*a*) junction of upper third and lower two-thirds of spine of eleventh dorsal; (*b*) opposite middle of spine of twelfth dorsal. Sacral nerves—First sacral: (*a*) lower border of spine of eleventh dorsal; (*b*) lowest point of origin of fifth sacral, the lower border of spine of first lumbar. Coccygeal: (*a*) lowest border of first lumbar; (*b*) just below the upper border of second lumbar.

Mr. W. ANDERSON and Mr. G. H. MAKINS read a paper on Cranio-cerebral Topography.

Dr. SHERRINGTON read a note on the Topography of the Pyramidal Tract in the Spinal Cord.

ULSTER MEDICAL SOCIETY.

THE opening meeting of the session 1888–89 was held in the rooms of the Society, the Museum, College-square North, on Wednesday evening, the 7th inst., at 8 o'clock.

The retiring PRESIDENT (Dr. Esler), having delivered a short address, called upon Dr. Henry Burden to take the chair as president for the coming session, which he did amidst applause.

Dr. BURDEN then proceeded to deliver his opening address on the Progress of Bacteriology in recent years, and he treated his subject in an interesting and masterly manner. At its conclusion a hearty vote of thanks was accorded him, on the motion of Professor Dill, seconded by Dr. Harkin.

A number of gentlemen were nominated as members.

The following is a list of the office-bearers for the session:—President: Henry Burden, M.A., M.D. Ex-President: Robert Esler, M.D. Vice-Presidents: Dr. Byers and Dr. J. A. Lindsay. Council: Dr. O'Connell, Professor Dill, Dr. Dempsey, Dr. Bigger, Dr. Mackenzie, and Dr. Calwell. Hon. Librarian: Dr. Strafford Smith. Pathological Secretary: Professor Sinclair, M.D. Hon. Treasurer: Dr. Hy. O'Neill. Hon. Secretary: John M'Caw, M.D.

Reviews and Notices of Books.

A Text-book of Physiology. By M. FOSTER, Professor of Physiology in the University of Cambridge. Fifth Edit. Part I. Pp. 352. London: Macmillan and Co. 1888.

DR. FOSTER, having in the first instance produced a standard work on physiology, is determined, by the care which he bestows on each successive edition, to maintain it in the high position it has gained. It is a thoroughly English book, and differs from the foreign works on the same subject in many particulars, the one which most resembles it being, perhaps, the important treatise of Wagner, which was materially modified and improved by Otto Funke, and has recently been edited by Gruenhagen. Both are characterised by the judicial manner in which all new matter is discussed, which was to be expected from the scientific attainments of the authors and from the circumstance that both are engaged in teaching. Both introduce a little, but comparatively little, histology and accounts of methods of research; but whilst the German treatise is extraordinarily full and complete in its treatment of the special senses, we think the palm may be given to the work before us as presenting the most intelligent and thorough discussion of such difficult subjects as the statics and dynamics of the circulation, and of the phenomena presented by nerve and muscle.

Professor Foster's Text-book is now divided into three parts, of which the first is before us, and, speaking generally, is devoted to the consideration of the blood, the circulation, nerve, and muscle. In its preparation the author acknowledges that he has received much assistance from Dr. Gaskell, Mr. Langley, and Dr. Lea, and from Mr. Shore and Mr. Wingfield, all well-known and able men, who materially aid Professor Foster in his work at Cambridge, and who in great part owe their education to him. In the present edition, owing to pressure having been exercised upon him, and clearly in great measure in opposition to his own judgment, some histology has been introduced. Thus several pages are devoted to an account of the structure of nerve and muscle; but histology has now such an able exponent in Professor Klein and the handy little volume he has published that it hardly seems requisite to encumber the pages of such a treatise as that before us with details which every man must have learned before he could read it with the slightest profit. The same may be said in regard to descriptions of methods and apparatus. If the latter subject is to be discussed at all, it should be done in the fashion adopted by Professor McKendrick in his excellent text-book. The title of Professor Foster's book should be "An Advanced Text-book." It is really a luminous digest of the whole of physiology, with little or no reference to authorities, and may well be read not only by the student preparing for his examination, but by the practitioner who, already familar with the practical application of physiological knowledge, is desirous of learning what value is to be placed upon the numerous essays and memoirs he has no time to master. He will find, for, example in this part a condensed summary of Gaskell's interesting observations on the relations of the spinal nerves to the ganglia of the sympathetic. The physiology of inhibition, the causes and phenomena of the coagulation of the blood, and many other points are fully and interestingly given, and some writers may also be taught how such subjects should be handled. The volume should be in the hands of every second year's student.

Lunacy in Many Lands. By G. A. TUCKER. Pp. 1564. London: Baillière, Tindall, and Cox. 1887.

THIS is a work of closely printed matter extending to 1561 pages. The area traversed is very wide, embracing the United States of America, Canada, Australasia, Africa, the Sandwich Islands, and Europe. Four hundred asylums were visited by Mr. Tucker, and on his return from New South Wales he had travelled about 140,000 miles. Failing health induced the author in 1881 to take a rest. Adopting the Dutch proverb, he determined that rest should not be rust, and he therefore concluded to visit the leading institutions for the insane throughout the world, and to report upon them to the Government of the Colony. It must not be supposed, however, that his mission was an official one. It was altogether self-imposed, and was carried out at his own expense. The Colonial Secretary, Sir John Robertson, complied with his request to be supplied with an introduction, in which Mr. Tucker is described as "a gentleman of some standing in this city (Sydney), who is visiting Europe and America in the interests of his business, for the purpose of inspecting institutions for the care of the insane, and collecting information regarding them." Mr. Tucker drew up a form of questions, to which he endeavoured to obtain answers from superintendents of asylums, and in a large number of instances succeeded. These replies form a considerable portion of this bulky volume, and constitute reliable statements, the value of which cannot be denied. A difference of opinion will exist as to the value of Mr. Tucker's own observations and conclusions. Their accuracy has been called in question, but it would require a very extended investigation to decide the proportion which mistakes or oversights bear to the collection of correctly recorded facts. If this proportion should be small, it would be only candid to admit that some misstatements must necessarily occur in the reports of 400 asylums. If, on the other hand, the errors are grave and frequent, the work

must possess a very doubtful value, seeing that it would be unsafe to rely upon any unverified statement.

In the summary which Mr. Tucker gives at the conclusion of his work, we are asked to believe that "at the present time there is no certain, fixed, or clear knowledge as to the causes of insanity, and that there is no sound practical information regarding the inception of the disease, such as would lead to regular scientific medical treatment." We do not agree with the author that this pessimistic conclusion is justified, as he alleges, by the numerously assigned causes differing widely from each other, or by the many opinions expressed as to the best form of medical treatment. It is true that one superintendent replies to the question asked in regard to the causation of insanity, "Cannot say," and that another replies "Uncertain," but a broad view of the alleged causes of mental disease would have led to the determination of at least some of the leading maleficent influences at work. Even out of the thirty-four replies selected by Mr. Tucker as examples of the conflicting causes adduced, "intemperance" is given in twenty-six instances. But Mr. Tucker is not likely to gain much systematic and detailed knowledge from the course he pursued in a matter requiring much more time and thought than his correspondents or informers could be expected to give. Much more definite conclusions could have been reached by him in regard to at least one country by studying the etiological tables of the English Commissioners in Lunacy, as published in their annual reports. With regard to the medical treatment there is no doubt some ground for Mr. Tucker's pessimism, for he has probably met with superintendents of asylums depressingly sceptical as to the use of medicinal remedies, and who thus play into the hands of those who are unwilling to admit that insanity is a symptom of a physical disease. But Mr. Tucker might have attached some importance to the opinions of the leading mental physicians, as deliberately expressed in their works. Had he done so he would have been able to place more satisfactory statements on record. An observation made by the author in regard to mechanical restraint cannot be allowed to pass unnoticed. After observing that "the great criminal asylums of England and America use no mechanical restraint of any kind," he observes that "the patient on admission, no matter how violent, should be treated as a sick person, and be placed in bed, unrestrained in any way, the prone position allaying the excitement." The reader is left with the impression that the patient will of his own accord remain horizontal, and no hint is given as to the employment of manutension. The absolutely misleading character of such a statement must be obvious to those familiar with the practical treatment of the insane. The only effect can be to mislead the public, and to cast blame upon those who, if it is thought necessary to keep the patient in the "prone position," employ some form of mechanical restraint including the hands of attendants, which by a singular oversight or conscious inconsistency the Commissioners do not recognise as "restraint." We would seriously draw the attention of the authorities in Whitehall-place to this omission, as also to that of the covered prolonged bath.

We have freely criticised Mr. Tucker's book, but we give him credit for remarkable industry in the visitation of asylums and in the collecting of information. It is probable that some portion of this record will prove of lasting interest.

OUR LIBRARY TABLE.

Notes on Surgery for Nurses. By JOSEPH BELL, F.R.C.S. Ed. Edinburgh: Oliver and Boyd. London: Simpkin, Marshall and Co.—A second edition of this little book has soon been called for, the first having been brought out during the past year. This of itself is a strong proof of the favour with which the book has been received. As some of our readers will remember, in our previous review of the work, we pointed out its proposed scope, as expressed in the preface, "to aid nurses who take an interest in their duties to understand their cases, and to follow intelligently the clinical work in the wards." The directions are clear, and the description of special subjects is simple and easily to be understood. The author touches in a general manner on inflammation, suppuration, ulceration, gangrene, pyæmia, septicæmia, the healing of wounds, burns, and scalds, fractures and dislocations, tumours, special operations, and the surgical nursing of children. The book would have a wider usefulness by the addition of a chapter on the arrest of hæmorrhage, also by fuller instructions as to the prevention and treatment of bedsores, the insertion of displaced tracheotomy tubes, and other matters.

The Extra Pharmacopœia. By WILLIAM MARTINDALE, F.C.S. *With Medical References and a Therapeutic Index of Diseases and Symptoms,* by W. WYNN WESTCOTT, M.B. Lond. Fifth Edition. Pp. 462. London: H. K. Lewis. 1888.—This well-known little book has now such an established position that a fifth edition calls for scant criticism. In spite of rigorous revision, the size of the book is gradually increasing, new remedies calling for notice, and new formulæ being requisite. The present edition worthily maintains the standard aimed at in the past, so that this little book is indispensable to all who wish to keep well abreast of therapeutic progress. The secondary list of drugs, to which medical attention has been "more or less directed," almost indicates by its brevity that all new or rather extra-pharmacopœial remedies are largely employed.

The Art of Dispensing: a Treatise on the Methods and Processes involved in Compounding Medical Prescriptions. Published at the Offices of the Chemist and Druggist. London. Pp. 280. 1888.—The explanation of the absence of the name of the author upon the title-page is to be found in the preface, which shows that this book is an adaptation of the *Chemists and Druggists' Diary* for 1885, to which many eminent English pharmacists contributed. The work is essentially practical, and is likely to prove useful to those engaged in dispensing. It contains many valuable hints and directions, but occasionally it indulges in suggestions calculated to raise a smile, as when the dispenser is gravely warned against "scolding the apprentice and joking with his fellow-assistants." When dealing with disputed points, such as the propriety of giving copies of prescriptions, the views of various chemists are given. A very valuable section gives instruction in dispensing German and French prescriptions, numerous examples of facsimile prescriptions in various stages of illegibility being presented and explained. In the appendix, terms likely to occur in French and German prescriptions are arranged alphabetically, and are followed by a surprisingly long list of abbreviations used in prescriptions. An excellent index renders this a handy book for reference.

A Descriptive Catalogue of the Pathological Museum of Charing-cross Hospital. By JOHN H. MORGAN, M.A., F.R.C.S. London: Harrison and Sons. 1888.—The publication of catalogues of the valuable museums attached to our metropolitan hospitals cannot be too highly commended. It brings to notice many interesting specimens, and greatly facilitates the work of pathological research. Mr. Morgan, who is curator of the Charing-cross Hospital Museum, has held the office since the transfer of the collection to the new buildings, and has devoted himself to the arrangement of the specimens and the compilation of this catalogue. In adopting the plan of classification pursued by the compilers of the catalogues of the museums of the Royal

College of Surgeons, St. Bartholomew's, and the Middlesex Hospitals, Mr. Morgan has consulted the interest of students and others, to whom the task of reference and comparison is thereby lightened. This museum seems to be particularly rich in specimens of rheumatoid arthritis, which were collected by the late Mr. Canton; and there is also a large series of fractures, especially of the long bones. Amongst other interesting specimens, we note No. 506, congenital constriction of the aorta; No. 624, basilic vein affected by inflammation due to bleeding from the median basilic vein; No. 653, interstitial pneumonia; No. 754, duodenitis from a case of burn; No. 819, Littré's hernia; Nos. 875–8, specimens of disease of the thyroid; No. 954, hydatid cysts of brain; Nos. 961 and 962, tumours of spinal cord; and No. 988, retained testis.

The Quarterly Journal of Microscopical Science. Edited by Professors RAY LANKESTER, E. KLEIN, H. N. MOSELEY, and ADAM SEDGWICK. No. 114, Vol. XXIX., Part 2. London: J. & A. Churchill.—This part contains:—1. The Structure of three new Species of Earthworm, with remarks on certain points in the morphology of the Oligochæta, by Frank E. Beddard. This paper chiefly deals with the structure of Acanthodrilus Annecteus, Deinodrilus Benhami, and Typhæus Gammii. 2. Development of the Fat Bodies in Rana Temporaria, a contribution to the history of the Pronephros, by Arthur E. Giles. In this contribution Mr. Giles shows that the part of the kidney which undergoes conversion into fat body is the pronephros or head kidney. 3. Two new types of Actiniaria, by G. Herbert Fowler. Lastly, Dr. Beard gives the second part of his Morphological Studies on the Development of the Peripheral Nervous System of Vertebrates, which includes the Elasmobranchii and Aves.

The Journal of Anatomy and Physiology. Conducted by G. M. HUMPHRY, Sir WM. TURNER, and J. MCKENDRICK. Vol. XXXIII. New Series, Vol. III., Part 1. October, 1888.—This part contains:—1. A memoir by Dr. R. W. Schufeldt on the Comparative Osteology of Arctic and Sub-Arctic Water Birds, with five plates. 2. Professor Hamilton: Effect of Chronic Disease of the Valves of the Heart upon the Sound Orifices, the Cavities, and the Walls. 3. Robert Kirk on a New Acid found in Human Urine which darkens with alkalies (alcaptonuria). 4. Professor Windle on the Limb Myology of Procyon Cancrivorus and of the Ursidæ. 5. Alfred Young and Arthur Robinson on the Anatomy of Hyæna Striata. 6. J. Symington: The Rectum and Anus. 7. Walter Pye: Growth-rate of the Bones of the Lower Extremities, with especial reference to rickety curvatures. 8. Professor Struthers: Some Points in the Anatomy of a Megaptera Longimana. And lastly, the Proceedings of the Anatomical Society of Great Britain and Ireland. The paper by Dr. Symington on the Rectum and Anus is particularly deserving the attention of gynæcologists and surgeons.

The Royal London Ophthalmic Hospital Reports. Vol. XII. Part 2. July, 1888.—This part contains ten articles, of which the chief are one by Mr. E. Nettleship on the Prognosis in Chronic Glaucoma; a second very good one, by Mr. Marcus Gunn, on the Nature of Light-percipient Organs and of Light and Colour Perception; and a third, by Mr. J. B. Lawford, on the Pathological Anatomy of Lamellar or Zonular Cataract. The minor articles are: a case of Intra-orbital Hæmorrhage and other Eye complications in connexion with Hæmophilia, by Priestley Smith; Syphilitic Disease of the Eyelids, by Jonathan Hutchinson, jun.; Atropine Irritation, by E. Treacher Collins; and by the same author a paper on the Treatment of Suppuration after extraction of Cataract. Lastly, Mr. W. J. Collins gives an account of the Capsulo-pupillary Membrane and its varieties.

Dictionary of National Biography. Edited by LESLIE STEPHEN. Vol. XVI. London: Smith, Elder, and Co. 1888.—This, the most recently issued volume of this valuable work, runs from "Drant" to "Edridge." The details in its contents are, as far as may be judged, full and accurate, and the volume is in every respect equal to those which have preceded it, and on which we have on many occasions commented.

Cassell's New Popular Educator. Part I. Cassell and Co., London, Paris, New York, and Melbourne.—This is the first part of an entirely new and revised edition of the "Popular Educator"—a work which has for upwards of a quarter of a century been the leading educational manual of the people.

New Inventions.

IMPROVEMENT IN CATHETERS.

WE have received from Messrs. Hockin, Wilson, and Co. specimens of their new catheters, with "patent unbreakable eye." By this patent a metal eye is introduced into the catheter, and the end gains in firmness and strength. The metal is invisible, but renders that part in which it is placed, usually the weakest of any in the instrument, by far the strongest; the catheter is thus rendered very durable. Another important improvement is the termination of the channel of the catheter at the eye, thus rendering the process of cleansing easy and more certain. These catheters are perfectly soft and pliable, and will stand any heat. Their framework is said to be carefully woven Belfast linen thread, covered by a new method with extremely elastic gum. These instruments are likely to be much in demand for certain cases of retention, and for those in which it is necessary for the patient to pass a catheter for himself.

MAGNETO-ELECTRIC BELLS.

THESE bells, a specimen of which has been submitted to us by Messrs. Cox-Walker and Campbell Swinton, of 75, Queen Victoria-street, E.C., the patentees, are designed to substitute the electric bells in ordinary use, the battery connected with which requires periodic attention, and is sometimes troublesome to maintain in effective order. The apparatus now under notice, on the other hand, being worked without a battery, is free from the disadvantage referred to. Then, again, no fitting is required, all that is needed being the establishment of connexion of the terminals on bell and generator respectively by means of a suitable length of insulated double wire. The bells are always ready for use, and appear capable of working for years without attention. These are distinct advantages, which cannot fail to recommend them to public favour.

DONCASTER INFIRMARY.—The annual meeting of the governors and subscribers to this institution was held on the 29th ult., when it was reported that the number of in-patients during the year had been 200, and the dispensary patients 2361, being an increase of 7 and 267 respectively over the numbers for the previous year. The financial report was also satisfactory, the receipts from annual subscriptions and the collections on Infirmary Saturday having been considerably in advance of the sums realised in the preceding twelve months.

WEST OF ENGLAND EYE INFIRMARY.—The 80th annual meeting of the governors of this institution was held at Exeter on the 26th ult. The medical report showed that there had been 1852 patients under care during the year, of whom 1595 had been discharged. The total number of patients since the opening of the infirmary in 1808 had been 73,656. The income during the year amounted to £1778, and the expenditure to £1663.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 17, 1888.

THE Government of Bengal has gradually had forced upon it the necessity of taking some steps with regard to recovered criminal lunatics. The existing accommodation of ordinary asylums has proved insufficient for the steady accumulation in them of this class of lunatics, and the urgent need for economy forbids the indefinite expansion of the accommodation for the custody of lunatics who might perhaps be safely made over to the care of their friends. In addition to this, it appears that difficulties have arisen in consequence of the absence of any rules for the guidance of the judicial authorities and the Government in dealing with individual cases which came up for consideration from time to time. A Governmental committee was appointed last year to investigate the whole subject of the release of criminal lunatics, and we print elsewhere an epitome of the report which they have drawn up, and which was published in the *Calcutta Gazette*. In reviewing the work of this committee it is necessary to bear in mind that the manifestations of insanity in India are modified by various conditions. Of these the chief are the natural inoffensiveness and docility of the people, who in their excitement are more loquacious and abusive than actually violent. This affects to a great extent the character of their insanity, and makes them very amenable to mild treatment. Again, in Bengal, among the predisposing and exciting causes of insanity, ganja takes the place of alcohol. Its effects, though equally violent, in many instances are much more evanescent, and its habitual use does not lead to the same organic tissue changes. A very large proportion of the graver crimes are committed under its acute influence, but under confinement and deprivation of the drug the mania which it causes rapidly subsides, and leaves the man a quiet and trustworthy inmate, with little tendency to relapse, in the absence of the drug, for the remainder of his life. It may be on this ground that the committee are able to say of criminal lunatics in India what certainly cannot be said of them in this country, that "experience shows that a very large proportion of recovered criminal lunatics can be released with almost absolute safety." Nevertheless, the committee show that the public safety is insufficiently guarded by the provisions of the Acts now in force. The report deals in a concise and practical manner with the legal, medical, and administrative aspects under which the subject of criminal lunacy has to be discussed. The non-existence of rules of procedure is the stumbling-block which stands in the way of the selection of the cases which are fit and proper for release or for continued detention; and the committee point out that when cases come up for consideration, "the main difficulty arises from the fact that in most the data necessary for the decision are not contained in the papers before Government." They go on to say that "the essential materials for forming a decision are the medical history of the case while under observation, the probable cause of insanity, the age and physical condition of the prisoner, and the social and physical state of the person offering security."

With the view of meeting these various wants, the committee have elaborated a code of rules for the guidance of executive officers, in which all the needful information as to the medical history and personal mental characteristics in individual cases is given, together with the procedure to be adopted under different groups of circumstances. These rules are evidently the result of much care and thought, and their great merit is that they fix a responsible and official standard as the basis upon which a judicial opinion will have to be formed in each case upon its own merits when the question of release arises, every consideration being given to the past and present mental condition of the individual on the one hand, and to the safety of the community on the other.

With reference to the periods of probation and the ultimate disposal in the case of recovered criminal lunatics, the committee lay down instructions which we certainly regard as sufficiently definite under the circumstances. After insisting upon a minimum period of probation in the asylum of three years from date of recovery from last attack, they pass on to recommend, before final release, further periods of probation in unpaid and ultimately in paid positions of trust either as overseers in asylums or as warders in gaols. "We do not think," they say, "that promotion to the post of paid keeper in the asylums can be utilised so easily, and with so good a guarantee of testing permanent recovery, as that to the post of paid warder in a gaol. The warders in a gaol are provided with quarters outside, and the recovered lunatic would live with them and be under the observation of a head warder, to whom his habits both by day and night would no doubt be known." The proposed scheme is accompanied, it is but fair to say, by certain limitations as to the number of recovered criminal lunatics to be thus utilised, and also as to the kinds of cases to which it should be made applicable.

We take it on the authority of the committee that such a scheme in India would be not only practicable but desirable; and, indeed, they inform us that the tentative experiments in this direction have produced satisfactory results. In England, we think that such a mode of disposal of our recovered criminal lunatics would neither be feasible nor workable, even if it could be shown to be beneficial, which we very much doubt. We wonder what the Civil Service Commissioners or Sir EDMUND DU CANE would say if it were proposed to them that even a limited proportion of our prison warders should be selected from recovered criminal lunatics. The impracticability of such a proposal as regards this country by no means, however, establishes its inutility in India; and the results of further experience will be awaited with interest.

The report of this committee is a boiling down or concentration of a wide range of experience and observation; it covers much ground, and presents in small compass a great store of valuable and useful information. There is only one expression of opinion in the report that we feel called upon to challenge seriously here, lest silence might be taken to imply acquiescence. Dealing with what we may call the *rationale* of the criminal acts of the insane, the committee express themselves in the following terms:

"We wish clearly to submit that in the case of an insane person the crime which he may happen to commit is always more or less fortuitous.....When a lunatic commits a crime, he does so suddenly, blindly, and without reflection.....The whole circumstances surrounding a lunatic's crime are accidental." Whatever may be the fact amongst the population of India, we contend that the criminal acts of the insane can in the great majority of instances be shown to be neither accidental nor fortuitous, but intentional — the *intention* being the outcome of pre-existing insane or delusional ideas or processes of thought. If it were not so, and if the opinion of our Bengal committee on this point were right; if, in fact, we were not able for the most part to trace back the criminal act of a lunatic to an intention, and then the intention to a diseased and irresponsible condition of the processes of mentalisation—to insanity, in short,—we would never be able to say to ourselves that the insanity which gave birth to the intention which expended itself in the criminal act was recovered from; we would never be justified or safe in speaking of any criminal lunatic as *recovered*, and still less in recommending him for the responsible post of prison warder.

FEW facts in the history of civilisation are more significant or more startling than the rapid diffusion throughout Europe during the present century of the doctrines of Pessimism. Under the influence of LEOPARDI in Italy, of SCHOPENHAUER and HARTMANN in Germany, and of the great Russian novelists in the dominions of the CZAR, the gospel of despair has spread and prevailed to an extent that may well seem surprising when we consider how little of comfort, help, or guidance that gospel contains. Briefly summed up, pessimism teaches that the pains of life outweigh its pleasures, that the fate of man is to struggle laboriously by paths that are distressing towards ends that are unsatisfying, and that it is the unhappy constitution of humanity to be unconscious of its happiness, but keenly alive to its misery. The pessimist philosopher does not only deny the possibility of attaining individual happiness now and here; he disdainfully rejects the doctrine of a future existence, and even refuses to the Positivist the consolation of looking forward to a regenerated humanity upon earth when life shall be purged of its dross and illuminated by the instreaming of universal knowledge. From such a gloomy metaphysic it would seem hard to educe any comforting or inspiring ethic. Pessimism can find no better stimulus to effort than the desire to lessen the appalling weight of human woe, which, according to its exponents, must ever remain overwhelming and ever resist every effort for its successful mitigation. It points to no Land of Promise, the prospect of whose milk and honey may inspirit the weary travellers through the wilderness; it sings no pæans over a coming era of freedom, plenty, enlightenment, and peace; it bluntly informs humanity that its lot is evil, that its best efforts will never achieve aught but some trifling mitigation of its sufferings, and that there is hope neither in the future of the race nor beyond the grave.

These doctrines, although proclaimed and accepted throughout a considerable portion of the Continent as a new Evangel, are really an echo of Buddhism, and are in every essential respect identical with the teaching of Prince GAUTAMA, whose influence in the entire Eastern world has been so potent. Berlin has answered Benares in the cry that life is evil, that hope is vain, that only in self-renunciation will the cravings of man find solace and rest.

When we come to consider pessimism from the impartial point of view of scientific scrutiny, we become impressed with the conviction that it indicates less a normal development of human thought than a moral and intellectual disease—the outcome, in all probability, of the unhappy surroundings of the individual or the untoward tendencies of the epoch. The child in the nursery, the youth in his academic or mercantile career, the average man or woman, to whom health and a reasonable proportion of the goods of life have accrued, never stop to ask the question whether life be worth living, but they indicate their unconscious conviction of its inestimable worth by acting as if its preservation were an end compared with which all others are insignificant. If life be stigmatised as worthless, the general sense of humanity will conclude that the speaker has probably made shipwreck of its worth. So sensible are the German pessimists of the risk to their philosophy from the influence of "the individual factor," that they deal with this difficulty at great length, and protest with all the scorn at their command that no hardship or misfortune in the life of the philosopher has availed to add any darker tinge to his teaching. For "constitutional pessimism," or, in other words, for pessimism springing from obvious physical or moral causes in the individual, they have an unmeasured contempt. Yet who shall confidently exclude the influence of health, temperance, and a favourable environment from exercising weight in the arbitrament of so complex and far-reaching a problem as that of the value of life? Will the dyspeptic, the hypochondriac, or the sensualist be likely to appraise the pleasure and satisfaction of living at the same value as the man who to the *mens sana in corpore sano* has added purity and self-control? Life may be evil, not because its satisfactions are beyond reach, but because they have been enjoyed and abused. Who shall say whether the latter class may not bear a very considerable proportion to the former? The fundamental postulate of pessimism, that man is ever striving after the unattainable, and that the striving is in itself painful, is not the verdict of the unbiased human consciousness. There is joyousness in labour, in the free play of physical and mental activity, even although its end should be either incapable of realisation, or unsatisfying if realised. Nor can it be granted that a contented satisfaction with life is towards its close an altogether rare phenomenon. HORACE depicts man as departing from life like the satisfied guest who has fared abundantly, and leaves the feast without regret. Surely this picture is not wholly imaginary.

There can be little doubt that the pessimism of modern Europe has its root to a large extent in social hardships and wrongs. The burdensome military system of Germany, the poverty of the Italian peasantry, the lack of individual freedom in Russia—these make life hard and unlovely, and naturally enough suggest doubts regarding its worth. The remedy is to be sought, not in philosophy, but in practical reform. When men are free, engaged in not distasteful

labour, and moderately prosperous, pessimism has little hold upon them. SCHOPENHAUER and his followers would no doubt deny that freedom, congenial occupation, and material prosperity are ever likely to be attained by the majority of the race, but there seems no adequate ground for despairing of such a consummation.

While pessimism is in the main a harsh and paralysing doctrine, it has its better side. It indicates a quickened recognition of the sufferings of humanity, which the cheap philosophy that "all is for the best in the best of all possible worlds" so calmly ignores or depreciates. To this element of truth in its teaching must its influence be in the main attributed, and if its rapid diffusion and increasing popularity serve to startle our arm-chair philosophers and theologians, and to rouse them to meet the ills of men with some better medicament than comfortless platitudes, pessimism will not have been promulgated in vain.

UP to the present time snow-blindness has been looked upon by competent observers as a disease of the interior parts of the eye, an irritation of the retina and the optic nerve due to the intense reflection of the light by the snow. Thus LEBER considers snow-blindness a superior degree of dazzling. Others think that there is some relation between it, hemeralopia, and nyctalopia. Medical men who have had an opportunity of investigating this disease have described in connexion with it very great conjunctival irritation. They have either explained this, with REICH, as a reflex symptom of the dazzling due to the intense brightness of the snow, or they have held with SCHIESS-GEMUSEUS that the conjunctivitis is independent of the blindness and is due to the desiccating influence of the rarefied air. Dr. BERLIN, a Swedish observer, who made a special study of this disease during NORDENSKIÖLD'S expedition to Greenland in 1883, holds views both as to the nature and cause of the affection diametrically opposed to those at present taught. After a careful study of Arctic literature and the ophthalmological records of the disease, Dr. BERLIN has been able to determine that this affection is met with as far north as any expedition has penetrated, but is unknown south of certain degrees of latitude. He has constructed a chart of the Arctic distribution of snow-blindness, which shows that it follows very closely the sinuosities of the isothermal lines. South of this region snow-blindness is only met with sporadically in high mountains. In the Arctic regions it breaks out usually in the spring-time, but it is also met with in summer wherever snow remains, as on the glaciers. The disease is rife not only when the sun appears but also during snowstorms and fogs. The following are the symptoms observed: intense burning pain in the eyes, commencing with a pricking sensation as if produced by a foreign body, increased secretion of tears, photophobia, and blepharospasm. At first there is hyperæmia of the conjunctiva of the globe, then of that covering the eyelids. Soon a chemosis of the globe appears, corresponding to the opening of the lids. In grave cases the cornea becomes dull and opaque. The pupils are contracted and the fundus oculi is slightly hyperæmic. The visual power is not diminished, but the field is narrowed by the above changes. The large majority of cases get well at the end of two or three days if the patient guards himself against the exciting causes. In some cases corneal ulcers make their appearance, and sometimes more destructive processes, causing diminution and loss of vision. Except in these cases, snow-blindness does not produce loss of vision. Occasionally the affection attacks one eye only, and that the one usually turned towards the sun. Animals may also suffer from the disease. In Dr. BERLIN'S opinion, the symptoms, as well as the manner in which they are produced, invalidate the supposition that the blindness is a dazzling caused by the snow. In reality, the dimness which is caused by a strong light thrown on the eyes—the sun, for instance—is not accompanied by any pain or the least symptom of any irritation of the anterior parts of the eyes. In these cases, however, there is a constant lessening of the visual field, accompanied by scotomata, which are altogether wanting in snow-blindness. Moreover, if the current teaching were correct, snow-blindness ought to be prevalent everywhere where there is snow and sunlight, but it is not. Neither will the fact of the rarefaction of the air explain this disease, so common in the Arctic regions. Places where snow-blindness is so rife are also remarkable for their low temperature and the want of humidity of the air. As it is the humidity of the air which principally absorbs the radiant heat, the caloric rays of the sun must, in these localities, manifest an intensity of action far above the common. Observation has shown that this is the case, for on high mountains and in the Arctic regions exposure to the sun's rays produces on the bare skin an excessively painful dermatitis, which the radiant heat reflected by the snow very much aggravates. As a result of several observations, it is found that the effects of exposure to the sun are most severe in springtime. The eyes are affected simultaneously with the skin or somewhat previously. The process is the same: hyperæmia of the skin and the conjunctiva, then serous exudation, both followed by the intense burning sensations so characteristic of snow-blindness. Dr. BERLIN rejects the hypothesis that the retinal hyperæmia might be produced primarily by exposure to the sun; he depends, amongst others, on the experiments of JANSSEN, which showed that an excessively small amount of radiant heat penetrated to the retina. The ordinary treatment adopted is the use of spectacles of dark-coloured glass, and opiates to relieve the great pain experienced. Instead of the latter, Dr. BERLIN suggests the application of cocaine.

THE ordinary meeting of the Council of the Royal College of Surgeons of England held on the 8th inst. presents some points of interest to the Fellows and Members of the College. We notice that a report on the conduct of examination was presented from the Committee of Management of the two Colleges. The regulation affecting candidates for examination in anatomy and physiology (*vide* THE LANCET of the 10th inst., p. 944) appears to be a fair one. The Committee of Management, we may note in passing, is one controlled by the Fellows of the College of Physicians on the one part, and by the Council, and not by the Fellows, of the College of Surgeons on the other part. This is yet another instance of the inequality of the status occupied by Fellows in the Conjoint Scheme.

An expenditure of over £5000 on the new museum was

authorised, without any consultation with the corporate body. The disciplinary powers of the Council of the College were to be left untouched by the General Medical Council, as the Council of the College deemed itself to be fully competent to carry out Section 16 of the bye-laws or even to improve upon it.

The Council of the College has at last spoken on the subject of reform, which was again pressed on its consideration at the general meeting on November 1st, 1888. The reply is so weak that we will quote it again as illustrating the views of the Council of the College in opposition to that of the College: "It seemed to the Council best, in the interests of the College, that the discussion on the subjects which have been in dispute should cease with the grant of the Supplemental Charter; that they cannot believe that any advantage is likely to arise from reopening questions which have been fully considered; and on behalf of the College they trust these questions will now be allowed to rest."

Doubtless, some of the members of Council would hail the Supplemental Charter as an earnest of truce; but what peace can there be so long as the rightful power of the many is *absolutely* surrendered to the unsympathetic hands of the few? For our part, we assert that these disputed questions have not yet been closed, nor are they at all likely to be shelved again, for as education advances and greater power is entrusted to the keeping of the many, so the argument of self-rule at the College becomes irresistible, and the present rule of an oligarchy less defensible. Until such moderate reforms as have been prospected are carried, surgeons must apply more precision in their use of *collegiate* terms: e.g., not to confuse the words "Council of the College" with the more expressive and comprehensive word "College"; to recognise that, up to the present, the Presidentship of the College exists nominally, but not in reality; that a Fellow of the College exercises only the rights of a Member, and that a Member is but a *Licentiate*. The College expresses itself now only at the annual meeting, and that expression may be translated into "Vox, et præterea nihil."

Annotations.

"Ne quid nimis."

THE PENAL POWERS OF THE MEDICAL AUTHORITIES.

THE disciplinary powers of the medical authorities are in a very chaotic state. Some have no such power. Those which seem to have them are not quite sure about them or their validity, and there is great variety as to the nature and extent of the powers of this sort possessed by bodies which are credited with them. Under these circumstances the bodies are rather slow to exercise their penal functions, and show a disposition to throw all such duties on to the Medical Council. This state of matters is felt to be unsatisfactory. It is also costly. The Medical Council is a large body, and not well fitted for, in the first instance, investigating elaborate charges against medical men. It is, however, right that no man should be erased from the Register without its sanction, as required by the present Acts. The President of the Medical Council, Mr. John Marshall, has drawn up a memorandum setting forth the actual state of the case, and making various suggestions for a short legislative measure that will give the necessary powers to each body to deal with its own graduates or diplomates, and to give similar powers to all bodies. The legal advisers of the Council, Mr. Muir Mackenzie and Mr. Frederick Willis Farrer, think there are good grounds for applying to the Legislature for extensions and modifications in the existing powers of the qualifying bodies and of the General Medical Council. Their suggestions also include provisions for defining and simplifying powers of restoration to the Register, and for giving the Medical Council power of erasure from the Foreign and Colonial Registers. Both the President and the lawyers suggest that the judicial powers of the Council might be delegated to the Executive Committee, or rather that this committee should have a power of inquiry in the case of charges of infamous conduct in any professional respect, and that their report should be conclusive as to facts reported. It is certain that the disciplinary powers of the bodies and of the Medical Council need definition, and even extension, and we trust that no time will be lost on the part of the Council in asking its legal advisers to formulate proposals to this effect that may be ready for introduction to Parliament at the opening of the session of 1889.

THE TRUE NATURE OF TYPHLITIS.

THE recent discussion at the Medical Society upon Dr. Bull's paper, as well as that which followed the paper of Mr. Treves read before the Royal Medical and Chirurgical Society last session, go to confirm the opinion as to the rarity of a true typhlitis apart from inflammation of the appendix cæci. In the clinical lecture contributed to these columns a few weeks ago, Sir Dyce Duckworth affirmed that "without doubt the most common cause of typhlitis is ulceration of the appendix," although he does not wholly discard the time-honoured explanation of typhlitis stercoralis. As pointed out at the Medical Society by Dr. Weir, the evidence of the post-mortem room gives no countenance to the old doctrine, for in every recorded fatal case the appendix was found to be the starting-point of the mischief. The same view was forcibly expressed by Mr. Treves, and although the opinion may be said to be founded only on cases which have required surgical intervention, or which have proved fatal from perforation of the appendix either directly or indirectly, yet it would be difficult to establish a clinical distinction between such cases and the more common class of case in which the symptoms resolve and recovery takes place. For our own part, we frankly admit that in the majority, perhaps in all, the cases of so-called typhlitis it is the appendix which is inflamed, perhaps ulcerated, with a localised peritonitis (i.e. peri-typhlitis) as the consequence. That this should be frequently associated with fæcal accumulation in the cæcum itself is not surprising; but that the cæcum is generally inflamed apart from the rest of the bowel, except in the unusual circumstance of long-standing impaction of its contents, as in cases of stricture of the colon or rectum, is most questionable. Granting, then, that the symptoms ascribed to typhlitis are due really to inflammation of the appendix (we strenuously object to the barbarism "appendicitis") and perityphlitis, there is nothing surprising in the frequency of the occurrence, or in its common termination in recovery, or in its liability to relapse; although as to relapse we lack definite statistical evidence upon its frequency. It is rather surprising to hear of so many cases passing on to suppuration, as in Dr. Bull's experience; and his recommendation to use the exploring needle to detect the presence of pus is one to be followed with caution. In these days of abdo-

minal surgery it would not be surprising to find advocates for surgical interference in every case of perityphlitis. At present the discovery of suppuration is held to justify such intervention; but the physician may reasonably urge that even the existence of pus in a localised peritoneal exudation does not of necessity exclude spontaneous recovery. The appendix cæci will, we foresee, prove the battle-ground of a struggle between the advocates of a medical or surgical line of treatment in typhlitis.

THE HEIDELBERG SEWAGE TANK SYSTEM.

WE have been favoured by Mr. Charles Hancock, F.S.S., with a translation from the *Gesundheit* of a paper by Dr. Carl Mittermaier on the method of sewage disposal by tanks or pails as adopted in Heidelberg. The system is described as having had its origin principally in the difficulty found in procuring a suitable site for a sewage farm and filter-beds, and in the uncertainty that existed at the time as to the proper methods by which chemical treatment could be applied to sewage. The waterworks were also unable to supply a sufficiency of water to adequately flush sewers which were made to receive sewage largely composed of fæcal matter. The tank system was hence adopted, butts or petroleum casks answering quite as well as iron tanks; and, as regards the soil pipe passing from the interior of the house to the tank, either a syphon apparatus or a direct acting valve trap was inserted in it. The system, it is asserted, has become thoroughly popular, and this notwithstanding initial difficulties in introducing a new system; and with the extension of the city's main drainage system privies or closets communicating with the drains were ordered to be disconnected, and no night soil was to be allowed to find its way into the new sewers. And not only so, but some 550 other localities—German and foreign—are stated to have followed the lead set by Heidelberg in this matter, the results attained being held to be perfectly satisfactory in point of freedom from nuisance and wholesomeness. In so far as this system has got rid of the old latrine or privy and of the underground cesspool, it must be admitted to have effected a distinct change for the better; but it is quite evident from some parts of Dr. Mittermaier's paper that he compares it with sewer and drain systems such as should not exist rather than with efficient ones. Thus, he writes: "Not less dangerous may sewage become, if bearing ..... disease germs it is allowed to go into the public sewers. On the walls of these sewers the morbific germs find a highly suitable soil of development, favouring reproduction. Owing to the strong current of air, more particularly characterising well-constructed sewers, with variations of temperature as between the interior thereof and the outer air, and with sudden changes of barometric pressure, sewer gas mingled with disease germs gets driven back into dwelling-houses; and this will take place, in defiance of the most cleverly contrived water-sealed traps." Here we have reference to trust in traps to keep sewer air out of drains and houses, a reference which shows clearly that the principles which for the last ten years have been making such rapid and general progress in this country—namely, that of aerial disconnexion of house drain from sewer, and of waste pipes from drain—are not apprehended. No modern bye-laws as to house drains and their connexion with the sewers would in this country tolerate trust in the best water-sealed trap, the true method of such connexions being indicated in the annotated edition of the model bye-laws issued by the Local Government Board. Then, again, we should deprecate anything like a general introduction of this system even into places where some difficulties as to ultimate disposal of sewage did exist, because it is well known that the elimination of mere solid excreta from town sewage does not materially get rid of the difficulty. Domestic liquid refuse, washings of roads covered with horse-droppings, &c., are of themselves sufficient to constitute real sewage, in so far as the question of disposal is concerned; and, as a matter of fact, our towns having a pail-closet system do not, in consequence of this, find that they are freed from the common difficulties attaching to sewage outfalls. So also, since Heidelberg commenced its operations, great advance has been made in the chemical treatment of sewage, and before anyone contemplated the adoption of the Heidelberg system we would at least urge him to pay a visit to the Acton sewage works, where the magnetic carbon system is now in vogue, under circumstances of efficiency in point of effluent and economy of space and material that were never contemplated when the Heidelberg system was first introduced. We do not for a moment contend that no district will have difficulties to contend with by adopting one of the modern alternatives to the suggested tank system, but we believe that these difficulties may now be more easily overcome than ever; and that, once faced, the result will be more satisfactory than the adoption of the Heidelberg system advocated by Dr. Mittermaier. And, further, any possible advantages to the land that may follow on the use of the Heidelberg tank contents as a manure are, we believe, more than counterbalanced by the drawbacks to the system.

POPULAR ELECTION OF MEDICAL OFFICERS.

THE method of election to professional office by popular vote has many drawbacks, of which by no means the least arises out of the fact that the electors do not usually take any very lively interest in their work. Unless this were pretty generally understood to be the case, it would surely have been impossible for such an extraordinary claim to be put forward as was, in fact, advanced by the plaintiffs in the action of Howard against Hill, which has just been tried by Mr. Justice Kekewich. The question was as to the election of an ophthalmic surgeon to the Glamorganshire and Monmouthshire Infirmary, the appointment being claimed by Mr. H. Collen Ensor, in opposition to Dr. Tatham Thompson, who had been declared elected by the officer, whoever he might be, in charge of the poll. As to the facts, there was no dispute between the parties. In November, 1886, the governors of the infirmary passed a resolution to the effect that an addition should be made to the staff of the institution in the person of an honorary ophthalmic surgeon. For the vacancy thus created there were two candidates—Mr. Ensor and Mr. Cant. Mr. Ensor secured a considerable number of proxies for the purpose of this election, and Mr. Cant, perceiving that he would fail in the end, retired from the contest. Thereupon the secretary to the hospital wrote, informing Mr. Ensor that as no competitor was in the field the matter could not proceed, and so it rested until the annual meeting in January of last year. Then a fresh resolution was taken, as the result of which an election was held in the following April. The candidates on this occasion were Mr. Ensor and Dr. Tatham Thompson, of whom the latter, as we have already said, was declared elected. Mr. Ensor, however, tendered 140 proxies which had been given to him for the purposes of the previous competition between himself and Mr. Cant. Had these been counted they would have turned the scale in his favour, but, being disallowed, they gave occasion to the present proceedings. The action, however, was dismissed, the judge adopting what certainly appears to us the only possible view—namely, that "the proxy was not intended to be held for an immeasurable time. The whole idea was that it was to be a delegation of authority for a particular purpose, in this case for the election then in contemplation, and no other." With the outcome of the proceedings we find

no fault; but at every prior stage we find food for reflection. In the first place, it is much to be regretted, and a requirement against which we shall never cease to protest, that medical men should be called upon to canvass for appointments to which professional standing ought to give a well-recognised claim. Then, again, we feel a little uneasy at the keenness of the rivalry here manifested between brother practitioners. Of course we clearly recognise the difficulty of the position in which each was placed. But although we do not suggest the smallest blame on either side, so far as Mr. Ensor and Dr. Tatham Thompson are personally concerned, we do very much regret that they have been in connexion with this infirmary appointment the victims of most untoward circumstances.

SLÖJD.

THE Swedish system of *Slöjd* education is beginning to receive some well-merited attention in this country and America. The discussion which among ourselves is known as the technical education controversy is in Scandinavia recognised under the term (of somewhat uncouth aspect to the English reader) *Slöjd*. Having regard to its pronunciation, some writers among ourselves have Englished it as *Sloyd*, but we doubt whether it is worth while to attempt to naturalise so strange-looking and strange-sounding a word. Be that as it may, there can be no doubt that the experience and the discussions of our Scandinavian neighbours in the matter of *Slöjd* teaching are well worthy of our attention. From a monograph by Dr. Otto Salomon, director of the Normal School for *Slöjd* instruction at Näas, which reaches us in the form of a translation from New York, we gather that in Sweden, as among ourselves, the advocates of this particular form of technical education are divided into two schools. The one school would teach it for the sake of giving a distinctly practical turn to education and with the object of making the school into something like an educational workshop. The other school values *Slöjd* instruction not for the sake of the products turned out by the pupils or of the industrial skill which they acquire, but for the development which education in manual labour promotes, and for the healthful exercise which is involved in the use of tools. These latter are the purposes for which it seems to us that technical education in schools is best adapted. *Slöjd* is, perhaps, not quite so comprehensive a term as "technical instruction" among ourselves, since it is applied only to the teaching and practice of such industries as can be prosecuted in the cottage home. Hence, working in wood, as wood-carving, joinery, and turnery are the *Slöjds par excellence;* but if the object in view be to educate the faculties of observation and manual dexterity, the choice of methods will naturally be in practice limited to a very few, which demand only inexpensive plant and moderate space for their practice. Hence the distinction is probably a matter rather of terms and definitions than of a serious difference in point of substance; and, in any case, the important point is that the education of these faculties should be recognised as an integral part of any complete scheme of education. A very elaborate classical or mathematical education may leave a boy or girl sadly deficient on that side which comes into contact with the living world. To how many highly educated men and women, for instance, would it be possible to apply with only too much force and point the old description of heathen idols: "Eyes have they, but they see not; they have ears, but they hear not." The habit of interposing a book between themselves and the world around them has become so inveterate that they have grown to be helplessly conventional. They never doubt, for instance, that lightning moves in jagged and acutely angular paths, since poets and painters have commonly so depicted it; and they are not gifted with the curiosity or keenness of vision to discover that its course is, in fact, a very complex but perfectly sinuous curve. This is only an illustration, and instances might be multiplied a thousandfold. There is no question that, to many a man of finished culture, the training of his eyes to see things at first hand would be as great an enlargement of his mental horizon as the acquisition of a new language and the command of an unread literature. It is for these reasons that we are anxious to see the training of the faculties more systematically undertaken than is the case under our present educational system. The teaching of drawing does something to educate the eye and to develop the coördination of eye and hand. The teaching of music does perhaps even more by way of contribution to the coördination of various organs, and the corresponding development of the individual. Gymnastics and drill, again, have their own value for the selfsame purposes. But all these together are very far from exhausting the possibilities of training in this direction; and we strongly recommend to English schoolmasters the careful consideration from this point of view of the Scandinavian *Slöjd*.

THE PRISON POPULATION.

THE prison reports have in recent years afforded some very pleasant reading, and happily the present year is no exception to this rule. The commissioners who administer the local prisons, and the directors who have the eleven large convict prisons in charge, are both able to speak of a continued diminution in the numbers of prisoners coming under their care, and an almost equal improvement in their conduct while under restraint. The amelioration in the condition of these, the outcasts of society, is gratifying in every way. It speaks, as we hope and believe, to an elevation of the whole mass of the population, which has been sufficiently comprehensive to include even the criminal class in its operation, and it indicates also, in a manner still more unmistakable, that a large measure of success has attended the efforts which have been made in recent years to improve and perfect our prison discipline. From a sanitarian's point of view the results now shown by our prison management afford legitimate ground of satisfaction. On this point the commissioners are able to write as follows: "The yearly average death-rate for the sixteen years and a half ended the 31st March, 1878, was 11·6 per 1000, while for the ten years ended 31st March, 1888, it was 8·1. During the five years ended 31st March, 1888, there were only 11 deaths from enteric fever in the whole of the prisons, 9 from erysipelas, and 1 from small-pox;" and the directors, for their part, summarise their experience for last year in the language of the medical inspector's report to the effect "that there was not a single death from any eruptive fever or from diarrhœa or any disease which could be ascribed to defective sanitation." This result may be accepted so far as it goes, but there are serious defects to which we have on more than one occasion called attention in the accommodation provided in the neighbourhood of various court houses for prisoners awaiting trial. We are glad to gather from the present report that steps are being taken to bring about a much-needed improvement in this respect, and in some parts the matter is being attended to with commendable spirit and energy. But it is clear that public vigilance in this respect cannot yet be safely relaxed. Thus, for example, it is admitted that at such a place as Clerkenwell the accommodation is "bad," and no intimation is afforded that the authorities intend to improve it. On the contrary, it would appear that the official plan of meeting the difficulty is to bring the prisoners up a few at a time. We venture to say that this will not do. It is, no doubt, neces-

sary to keep untried prisoners in confinement; but it is not necessary, and it is not permissible, to confine them in insanitary cells without proper light, warmth, and other requisites of health and decency. We trust that the local authorities that are still in default under this particular will lay to heart the good example which has been so well set and so widely followed within the last few years.

WARM FOOD v. DRINK.

INDULGENCE in intoxicating drinks, though a consequence of diverse causes, is admitted to be in many cases closely connected with the want of suitable food. Among workpeople this want is particularly felt. It is a common thing to find that in establishments where a number of persons are employed during the whole day no adequate provision, if any at all, is made for meals. Time only is allowed. We cannot, indeed, expect that all employers will cater for their workpeople, though many firms do so. Such an arrangement, though sometimes convenient, is not indispensable. In large manufactories or warehouses it would probably be impracticable. The employed must, in this case, provide for himself. In order to do this, unless his work be near home, two courses alone are open to him: either he must carry food for the day to the warehouse or factory, or he must rely upon some neighbouring restaurant for the supply of his needs. Given a conveniently situated eating-house, his difficulties are considerably lessened, and in large towns he may in this way obtain all that he requires. Still, it may be doubted if, even in the metropolis, his opportunities of refreshment, apart from the ever-open public-house, are all that could be desired. There is also the question of cost, and a very cheap meal may, with the addition of train or tram fares, become too dear for a short and burdened purse. If the day's provision is carried from home, the cost will probably be less, but meals must often be taken cold. Some change of plan seems here very desirable. It has often occurred to us that if an arrangement could be brought about by which the food and drink thus carried by the worker could be heated at his place of occupation, the effect on his health, comfort, contentment, and labour would justify its adoption. The cup that so often inebriates those it cheers would not then be, as it now too commonly is, the one article of diet possessing any apparent pretensions to warmth.

TRAUMATIC AORTIC ANEURYSM FOLLOWING RAILWAY ACCIDENT.

A CASE of some medico-legal interest is recorded by Dr. D. Grant of Melbourne (*Australian Medical Journal*, Sept. 1888), in which a gentleman suffering from aortic aneurysm, attributed to a railway accident, recovered £2300 damages. The medical evidence was unanimous on the plaintiff's side, and no medical witnesses were called to refute the contention. The facts of the case are briefly these. The plaintiff, who had led an active life and shown no evidence of arterial disease, was in an express train on May 11th, 1887, when a collision occurred. He was at the time sitting with his face towards the engine, leaning slightly forwards, with his chest and hands resting upon his umbrella. At the moment of collision he received a blow on the chest and head, and was violently shaken, but did not lose consciousness. From that time he felt pain in the chest, and began to suffer from shortness of breath. Three and a half months later Dr. Turner diagnosed aortic dilatation, a diagnosis confirmed six weeks afterwards by Dr. Gardner of Adelaide. Dr. Grant saw him in consultation with Dr. Turner on Dec. 8th, when there was some dyspnœa, especially on exertion, and slight visible and palpable pulsation to the right of the sternum over the third and fourth costal cartilages, with a semicircular arch of dulness. The symptoms and signs became more marked, and iodide of potassium was prescribed. Death occurred suddenly on June 12th. The trial took place on April 16th and 17th, the damages being laid at £10,000. It was contended by the medical witnesses that the history of the case tallied precisely with the effect of a sudden blow on the chest, causing an excessive strain upon the walls of the aorta. This excessive tension was held to be due to the violent concussion of the whole body, the compression of the arterioles by the involuntary contraction of all the muscles, and "the direct compression of the ventricle during systole by the impact of the chest wall and consequent violent expulsion of its contents into the already over-distended aorta." The defence suggested: (1) The reasonable presumption of pre-existing arterial degeneration in a man of sixty-four, who had had dyspepsia and lumbago; (2) the existence of the aneurysm in a latent form before the accident; and (3) the inadequacy of the alleged cause to produce rupture of the aorta. These points were, as Dr. Grant states, easily refuted, so that the judge's remark that "not one jot or tittle of evidence" had been produced in opposition to the opinions of the medical witnesses, was fully justified. Although the medico-legal interest of the case may be said to have ceased with the jury's verdict, yet from a pathological point of view it would have been extremely interesting to have had a post-mortem examination, so as to have determined the precise seat and nature of the aneurysm and the condition of the arterial system generally. The duration of the case was thirteen months, and it is possible that proof of the traumatic origin of the aneurysm might have been obtained. Unfortunately no such examination was made.

PAUPERISM IN ENGLAND AND WALES.

IT would be very easy to draw mistaken inferences from the facts collected in the latest of the pauperism returns, which in many respects appear to indicate a falling back from the standard attained in recent years. In the first place, the number of paupers relieved has within the past three years shown a marked increase upon the numbers of the triennium immediately preceding, and the very hopeful symptom of an actual diminution in the number of paupers, occurring in spite of the continued growth of population, has now disappeared. But although this is so, the fact remains that the actual proportion of paupers to population is now less than ever heretofore. The rate of comparative decrease is not so rapid as it was in the more fortunate period between 1882 and 1886, but the movement is still in the right direction, and indicates a continued if slow growth of the population in the habits and conditions of independence. Another consideration which needs to be carefully borne in mind in any discussion of the statistics of pauperism is this, that the statistical result is very largely brought about by moral causes. In putting this proposition forward, we are far from suggesting that moral causes are less worthy of attention than material causes. On the contrary, we would for our own part rather choose, if choice were to be made, that pauperism should increase, if needs must, through the impoverishment of our people by material losses, than through their demoralisation. But it is well to get as nearly as possible to the actual facts, and if an increase in pauperism be in truth attributable to an increased readiness on the part of the very poor to accept public charity, or to a relaxation of the tests which the Poor-law authorities are accustomed to apply, it would in that case be a mischievous error to attribute such an increase to the aggravation of the pinch of poverty. To some considerable extent we believe that

the increased ratio of pauperism in the metropolis as compared with the whole country is to be attributed to these moral causes. The influence of the agitation of last autumn on both the poor and their guardians has not yet worn away. We are not at all sure that it is desirable that it should altogether pass away—at least so far as the guardians are concerned,—for the administration of poor relief very easily slips into a mere routine, from which nothing is more alien than the sentiment of charity, and than which nothing can well be more productive of class jealousy and reciprocal ill-will. In spite, then, of some appearances to the contrary, we draw a happy augury from these latest returns, and find these quite consistent with belief in the general well-being, both moral and material, of our people.

HÆMOGLOBIN IN HEALTH AND DISEASE.

DR. G. D. WILKENS, of Stockholm, has recently published a somewhat elaborate paper on the estimation of hæmoglobin and the number of the red corpuscles in the blood of both healthy and diseased persons. He seems to have made himself acquainted with the various instruments which have been devised by different observers, including those of Hayem, Malassez, Quincke, Gowers, Mantegazza, Bizzozero, Hénocque, and others. The one used by him, however, was Fleischl's hæmometer. Amongst other precautions he was careful to get his own sense of colour accurately tested. He takes as a standard for hæmoglobin Fleischl's standard as 100, which he thinks, however, is lower than the normal standard of Stockholm people. Of 642 individuals in good health, infants under two months old had 100 per cent. and more; from two months to twelve years the hæmoglobin decreased, but it increased to 100 per cent. and above between twelve and sixty-two years, after which time it again diminished. Dr. Wilkens divided the diseases in which he examined the blood into two classes—viz., primary and secondary anæmia. The primary anæmias were: chlorosis, simple anæmia, progressive pernicious anæmia, hæmorrhagic purpura, leukæmia, and pseudo-leukæmia. The secondary anæmias followed hæmorrhages, typhoid fever, acute croupous pneumonia, intoxications, acute articular rheumatism, pulmonary tuberculosis, carcinoma and sarcoma, organic disease of the heart, and diseases of the digestive organs. Generally he obtained the same results as those furnished by the excellent researches of Laache, Engelsen, and Leichtenstern. He classed as simple primary anæmia four cases that could not be placed in the same category either with chlorosis or progressive pernicious anæmia. The lowest percentage of hæmoglobin—viz., 8 per cent.—was found in a case of the latter disease nine hours before death. Dr. Wilkens was also able to show that there was an increase in the quantity of hæmoglobin in proportion to the number of corpuscles, as also an increase in the size of these corpuscles in progressive pernicious anæmia. In typhoid fever, from the commencement and during its whole course, there was an increase in the anæmia, which attained its maximum after the cessation of the fever, and then diminished rapidly. A fact worthy of notice is that, of fourteen cases of hysteria and neurasthenia, twelve showed an excess of hæmoglobin. He sums up his researches as follows:—In disease there is no constant relation between the intensity of the hæmoglobin and the number of the corpuscles present. Excepting in progressive pernicious anæmia, a large quantity of hæmoglobin corresponds to a large number of corpuscles, but a small quantity of hæmoglobin may be found with a large or small number of corpuscles. Primary anæmia (chlorosis excepted) is caused both by a diminution in the amount of hæmoglobin and in the number of corpuscles. Secondary anæmia and chlorosis are produced most frequently, if not always, by a decrease in the quantity of hæmoglobin, the number of corpuscles usually remaining normal. In fine, the estimation of the intensity of the hæmoglobin is a very essential point in the examination of the blood.

MANCHESTER AND SALFORD.

MANCHESTER and SALFORD are, we gather, further thinking of the advantages each would derive from the union of the one with the other. Probably there are many difficulties which have to be surmounted before this amalgamation can be effected, but there is no doubt that sanitary administration could be better carried out if one authority dealt with the whole area. London is a striking instance of the difficulties which accrue to effective administration from division into numerous sanitary districts. So Manchester and Salford, although to a less degree, labour under the same disadvantage. Disease, indeed, takes no cognisance of municipal boundaries, and small-pox or fever in Manchester is hardly less dangerous to the inhabitants of Salford than it is to the residents of the other side of the Irwell. The lamented death of Mr. Leigh, the medical officer of health for Manchester, gives an excellent opportunity for the two boroughs to unite for the purposes of sanitary administration. The high position which Dr. Tatham of Salford holds among English medical officers of health, and his knowledge of local requirements, peculiarly fit him for acting as adviser to both corporations. Doubtless he would need proper assistance, but Manchester would gain materially if his services were secured for their city, and Salford would not be a loser by this arrangement. Whether the thoughts of the Manchester and Salford inhabitants have progressed so far as to make this possible, we are not aware; but it is a point well worthy of their consideration before the appointment of the late Mr. Leigh's successor is finally determined.

EVOLUTION IN BONE-SETTING.

HAPPILY for mankind, the general advance of surgery has long ago absorbed whatever was useful in the methods of the bone-setter. His art no longer stands as an irregular outpost of treatment—if, indeed, it ever truly did. The ablest exponents of what is valuable in it are not to be found practising under cover of its own very faulty qualification; but the surgeon, though he may still be excelled in rashness, has nothing to fear in point of skilful manipulation from the rivalry of ignorant handicraftsmen in this field. The bone-setter, popularly so called, is, we may say, an expert in surgical simples. Notwithstanding a record of successes attained in cases where no great anatomical skill was needful, or where a lucky turn just saved the patient from disaster, he too often rushes in where wiser men will not tread. The credit, if successful, is his own; while his failures are apt to be leniently regarded on account of his unprofessional character. His knowledge of the world, far greater than his surgical insight, enables him to strengthen his reputation in the eyes of a credulous *clientèle*, notwithstanding that he exhibits plainly enough to those who will note them the features of the bogus practitioner. It says little for the public intelligence that he still prospers at its expense. Many persons are ever ready in illness to seek the aid of novel expedients. Among this class he still flourishes. Of late, moreover, his position has somewhat altered, and, professing to possess a virtual qualification in medicine and surgery, he even comes forward as an advertised adept in the manual method of treatment. It has, in fact, been attempted to convert bone-setting into a specialty. It is probable that the public will, for a time at least, continue to favour this pretentious attitude. It is extremely improbable that

medical men, who have also been solicited in the interest of the new departure (see copy of circular in this connexion on another page), will countenance in any degree this trick of a waning trade.

THE LATE PROF. H. BAMBERGER.

THE Medical Faculty of the University of Vienna has sustained a great loss in the death of Professor Heinrich von Bamberger, at the age of sixty-six, after a long and painful illness. Von Bamberger was a native of Prague, where he mainly received his medical education, graduating in 1847. He also studied at Vienna (then at the zenith of its fame) with such masters as Skoda, Rokitansky, and Hebra. His first medical appointment was that of medical assistant in the Allgemeine Krankenhaus at Prague, where he soon became assistant in the clinic. From 1851-4 he was clinical assistant to Professor Oppolzer, who had come to Vienna from Berlin. In 1854 he was appointed Professor of Special Pathology and Therapeutics at Wurzburg, whence he was transferred to Vienna in 1872 to succeed Oppolzer. He had a great reputation as a clinical teacher, and was highly esteemed. His chief contributions to literature are his "Text-book on Diseases of the Heart" (1857) and a monograph on "Diseases of the Chylopoiëtic System" (1864), which formed one of the volumes of Virchow's Handbook. In addition to these systematic works, he made many contributions to current literature in all departments of clinical medicine.

SOLUBLE VACCINE MATTER.

IT had been previously established that a rabbit may be protected against the pyocyanic disease by injecting under its skin the soluble products of cultures deprived of all microbes by means of heat and filtration. M. Bouchard demonstrated that it was possible to obtain the same immunity by the use of urine collected from rabbits dead of pyocyanic infection, the urine being likewise free from microbes. These experiments prove the great part played by chemical substances manufactured by microbes in the body and eliminated by the kidney. MM. Charrin and Ruffer have sought to determine whether soluble "vaccine" matter which develops in artificial cultures could pass through the body of the rabbit and be eliminated by the kidneys without losing its power of conferring immunity. The experiments are reported in the *France Médicale*, No. 126. The answer to the question is given in the affirmative.

DANGEROUS TOYS.

THE manufacture of toys is not usually a dangerous process, but the circumstances attending the recent explosion in a factory at Wandsworth show that it is not always free from risk. In this case two girls employed in making amorces, or caps for use in toy pistols, were accidentally killed by the detonation of a number of these caps, due to the fact that one or more had been overfilled with its explosive contents. Major Cundhill, who conducted an inquiry into the matter, suggests that this branch of industry, which exists only for the amusement of young children, might be discontinued with advantage. In view of the recent unfortunate occurrence, his view deserves consideration. It is also necessary, at the same time, to remember that his argument is based upon a case in which faulty management is alleged, and he does not show that the use of these caps in small quantities by children has been attended by any hurtful consequences. It must be allowed, however, that they are not the safest form of plaything, even though sold in small quantities. Children probably would not much mind the loss of their present liberty to crack off these tiny explosives, but the case of the makers also demands a share of attention. Whether it is feasible at once to stop the manufacture we cannot say; but, if this is impossible, the facts of the accident, if they show anything, teach the importance of regulating very carefully the preparation in quantity of such unstable materials.

THE MORTALITY OF PNEUMONIA.

DR. WILLIAM OSLER (*University Medical Magazine*, Philadelphia, No. 2) points out that hospital statistics do not warrant the assertion that there has been any marked increase in the mortality from pneumonia of late years, as asserted by some, although the census returns of the United States favour the latter statement. But, as Dr. Billings points out, the comparison with preceding years is inaccurate, since the data were very imperfect and unreliable. At the Pennsylvania Hospital, with a total of 704 cases since 1845, the mortality has been 29·1, a rate sometimes much exceeded, as in 1875 to 1877, when it was 39·2, and sometimes quite as much lessened, as in 1845–47, when it was only 16 per cent. In the Boston City Hospital for thirteen years the mortality was also 29·1 per cent. Dr. Osler shows that in private practice the rate is lower than in hospitals, and points out that the increase of pauper populations in large cities is doubtless responsible in some measure for this diversity. Dr. Hartshorne's statement that the "mortality of pneumonia to-day is, under similar circumstances, more than twice as great as it was forty years ago," is not thus borne out; and Dr. Osler shows that in many cases pneumonia is absolutely uninfluenced by treatment. Yet those cases which do call for treatment are precisely those in which our methods are most futile. Post-mortem records show how seldom a simple pneumonia, apart from chronic disease of other organs, is a cause of death, but Dr. Osler thinks that it may be useful to divide the fatal cases into three groups: "1. Those in which the death has resulted from such complications as gangrene, meningitis, and ulcerative endocarditis—conditions at present beyond our art to remedy. 2. Cases in which death has resulted from mechanical causes—over-distension and paralysis of the right heart. 3. The large group in which death has been due to failure of the general powers under the influence of the high fever, or of the specific poison, or of both combined." He has often asked himself why death occurred in some cases, and had been struck with the distended right heart and systemic veins in the young vigorous subjects that sometimes succumb. This seemed to indicate that the heart had failed in over-distension, and he was determined "not to let such cases die without a copious venesection.' For ten years he has practised free bleeding (twenty to twenty-five ounces) in adults, and has seen but one case recover out of twelve or fifteen. The cases of bleeding in the late stage were uniformly fatal, as if the conditions present in pneumonia are something more than mechanical.

DISORDERLY MEDICAL STUDENTS.

THE medical student no longer stands in the public eye as the model black sheep of society. Byronism, which he once affected, does not now give the cue to his manners, and it has been proved to general satisfaction that his growth in healthy manhood does not imply a childish contempt for decent and gentlemanly behaviour, and that he is fully conscious of the fact. There are, however, exceptions to every general rule, and we are therefore not surprised to find that worse as well as better elements of character appear among those from whose ranks the profession is recruited. Lest we should forget this fact, an unpalatable reminder is forced upon us by the

conduct of one or two medical students at the Lord Mayor's Show last week. Disorder on this occasion took the form of apparently unprovoked, and in one instance rather cowardly, assault upon the police. We readily admit that the guardians of public order have not infrequently clashed with the exuberant energy of medical students, and in these conflicts the latter have not, as a rule, secured any greater glory than that of compulsory martyrdom. Yet, whatever may be said against their discretion on such occasions, dishonourable conduct could not usually be laid to their charge. In the instances above quoted a rougher type of student seems to have represented his fraternity, and we must be content to console ourselves with the reflection that his behaviour was as exceptional as it was discreditable.

COLECTOMY FOR MALIGNANT DISEASE, WITH SUTURE OF THE INTESTINE.

MR. KENDAL FRANKS operated on Oct. 30th, at the Adelaide Hospital, on a man aged fifty-eight, from whom he excised a large epithelioma, together with about six inches of the colon. The growth was the size of a large orange, and involved the hepatic flexure of the colon. It was remarkable previously to operation for its great mobilty, generally being found to lie between the umbilicus and pubes as the patient lay on his back. The colon was divided on each side of the tumour and the intermediate portion removed, along with some small but hard glands which lay between the layers of the meso-colon. The divided ends of the colon were approximated, and sutured carefully with fine silk. The patient is at present in a convalescent condition. There was a large fæcal evacuation on the fifth day per anum, and the bowels have been acting normally since. The structure of the growth was that of a columnar-celled epithelioma.

MEDICAL BULLETINS.

THE *Journal of the American Medical Association* (Oct. 27th) makes the recent allusion by Sir Dyce Duckworth (see THE LANCET, Oct. 6th) to the evil of publishing details of the illnesses of eminent persons the text of some remarks in the same sense. It refers the practice, which has grown so much of late, to the "so-called enterprise of the newspapers, which first persuaded themselves, and then the physicians, that the public must have all the details possible. In the case of distinguished persons there can be but little objection to the physicians letting the public know how they are in general terms; but it certainly is no business of the public to know all the minutiæ of symptoms and treatment, how often a laryngeal mirror is used, a catheter passed, or a nutrient enema given. The newspaper writers and the public do not understand more than a small fraction of the medical terms used in minute bulletins, and can get but an erroneous impression from them"; and the moral is pointed by an allusion to the case of the late Emperor Frederick.

REGISTRATION OF MIDWIVES.

AN interesting meeting was held at 33, Holywell, Oxford, on Oct. 25th, to discuss the question of the legal registration of midwives. Papers were read containing a short sketch of the past history of midwifery, stating the need for legislation in the future, and dwelling on the difficulties of country practice. Portions of the draft Bill of 1882 were explained, and an interesting discussion followed. Amongst those present were two members of the Midwives' Institute (London)—Mrs. E. Child and Mrs. J. H. Green—and others. A petition was largely signed at the conclusion of the meeting.

THE MILK-CURDLING FERMENT OF THE STOMACH.

DR. E. G. JOHNSON has studied the action of the milk-curdling ferment of the stomach in the clinic of Professor Riegel of Giessen, and subsequently in the Sabbatsberg Hospital, Stockholm. Researches were made in twenty-four cases on the presence of the ferment and the pathological conditions relative to it. Fourteen of these patients suffered from hyperacidity, accompanied in four of them by moderate dilatation of the stomach. In one of these latter there was also hypersecretion of the gastric juice. One case had considerable dilatation of the stomach with hyperacidity and marked hypersecretion. In three cases the dilatation was insignificant, but there was hyperacidity, complicated in one case by slight, and in another by very great, hypersecretion; in the third case the hyperacidity was accompanied by chlorosis. Three other patients suffering from hyperacidity were also the subjects of gastric ulcer. Dr. Johnson also examined four cases of hyperacidity with neither dilatation nor hypersecretion, of whom three were chlorotic; a case of catarrhal jaundice, four cases of severe chronic dyspepsia, and five cases of carcinoma of the stomach. The contents of the stomach were removed while the patient was fasting, and also four or five hours after food had been given for the purpose of the observations. Dr. Johnson sums up his researches as follows: 1. The milk-curdling ferment is a constant product of the glandular secretion of the stomach, and it is met with at all periods of digestion except in cases of cancer of the stomach, in which it is never found. 2. The ferment was also found in the hypersecretions of the gastric juice of a fasting patient after his stomach had been washed out the previous evening. 3. Gastric juice which contains hydrochloric acid, and which when neutralised causes coagulation of milk, does not appear to be affected in its action by the greater or less amount of acid contained in it at first. 4. The milk-curdling ferment does not pass into the urine. 5. The ferment is easily destroyed by an excess of alkali, and it is probably on this account that it does not pass into the fæces under normal conditions. 6. During fever the ferment appears to be absent from the stomach. 7. The ferment causes coagulation more slowly in boiled than in fresh milk. 8. During the coagulation of milk by the ferment the reaction remains neutral, and lactic acid is not met with after coagulation.

THE COMMA BACILLUS.

DRS. A. E. SALAZAR and C. NEWMAN of Valparaiso have published an interesting *brochure* upon the Cholera Bacillus ("Notas sobre el Espirillo del Cólera Asiático"), containing a succinct description of the methods of cultivation and preparation of specimens. The essay is illustrated by seven plates, very successful examples of microphotography, showing the microscopical characters of the bacillus.

LONDON AS A PLACE FOR CLINICAL STUDY.

IN the *University Medical Magazine* (Philadelphia) Dr. H. A. Hare writes concerning some of his experiences in the London hospitals. After speaking of the prevailing fashion among American medical students of proceeding to Germany for further study, and expressing his opinion that this is a mistake, since so many come over before having had any practical training in America, he says: "If a single specialty is to be studied, then Germany may be the proper place for the graduate of some years' experience and linguistic training; but for the training which is requisite to become a good *doctor* England is to be preferred." He then gives a highly appreciative account of the Brompton Hospital for Consump-

tion, the Great Ormond-street Hospital for Children, the National Hospital for the Paralysed and Epileptic, and briefly alludes to St. Bartholomew's and University College Hospitals.

YELLOW FEVER.

DR. STERNBERG, in a letter to the *Medical Record* (New York, Nov. 3rd), declares that Dr. Freire's alleged discovery of the specific germ of yellow fever—the *cryptococcus xantherogenicus*—is without foundation; that the micro-organism given to him by Dr. Freire as his yellow fever microbe did not correspond to his published description, and was a simple non-chromogenic micrococcus; also that he (Dr. Sternberg) never succeeded in isolating such a microbe from the blood and tissues of yellow fever subjects, nor did Dr. Freire attempt to show him any preparations of it during his stay in Rio de Janeiro. In fine, Dr. Sternberg concludes that "there is no scientific basis for Dr. Freire's claim that he has discovered the specific cause of yellow fever."

TUBERCLE IN THE AORTA.

P. DITTRICH relates (*Zeitsh. f. Heilk*, abstr. by Weichselbaum, *Centrlbl. f. Bacteriolg.*, iv., 20) a case of acute miliary tuberculosis in a boy, twelve years of age, in which the source of general infection appeared to be the rare (hitherto undescribed) condition of tuberculosis of the aorta; for to the posterior wall of the ascending aorta adhered some tuberculous lymphatic glands, from which the tubercle had spread into the coats of the vessel. Bacilli were found both in the glands and in the aortic wall, and it is assumed that they were disseminated through the blood stream by direct detachment from the intima of the vessel.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Regarding the erection of a pharmaceutical institute, it has been decided by the commissary of the Finance Minister that the necessary expense cannot be incurred just at present. Professor Sauer has resigned his position as instructor in Dentistry in the University Dental Institute; his place has been supplied by the appointment of Herr Ludwig Warnekros, who will combine with the lectureship the charge of the laboratory of dental technology. Professor Ehrlich having resigned his position as extern assistant in Professor Gerhardt's medical clinic in the Charité, his place has been supplied by the appointment of Dr. Krönich, formerly assistant under Professor Frerichs. Drs. Karl Fraenkel and Dühessen have qualified as *privat-docenten* in Obstetrics and Gynæcology.

Liège.—Dr. F. Fripont has been appointed *agrégé spécial* to deliver the course of lectures on Gynæcology in place of Professor Wasseige. Dr. Ernest Malvoz has been appointed assistant in the department of Pathological Anatomy.

Naples.—It has been decided to erect a new University building, at a cost of 16,160,000 francs, with lecture-rooms, museums, laboratories, libraries, and clinics all complete. It is expected that the building will take about four years. The old buildings are quite unsuitable for modern requirements, and are, besides, in a very bad state of repair.

Würzburg.—The new Physiological Institute is now in use, having been formally opened on the 3rd inst.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following eminent foreign medical men are announced:—Dr. F. Linzbauer, formerly Professor of Medicine in the University of Buda-Pesth, in his eighty-first year.—Dr. Salvioli, Professor of General Pathology in the University of Genoa, in his thirty-sixth year, of typhoid fever.

THE therapeutic uses of hypnotism were recently discussed in the Neurological Section of the New York Academy of Medicine, papers on the subject being read by Drs. Herter (who has lately studied the subject in Europe), Birdsall, Osgood Mason, and Mr. Cary of Boston. As might be expected, hysteria in its various forms was said to be the most amenable to the influence of this "agent"; but Dr. Herter declared that it was valuable in delirium tremens, and that there was great hope of its effects in alcoholism, morphimania, &c., although, he added, "surveillance in any asylum is also indispensable." He also described a number of affections, neuralgic and other, in which hypnotism was useful. At the same time, however "scientifically" the subject be treated, it is so open to abuse that its introduction into general therapeutics might be disastrous. Moreover, we have yet to learn how far the hypnotised subjects themselves may be permanently affected by the treatment.

DR. FRANK S. BILLINGS has prepared a Bill for presentation to the United States Congress to establish a national "Patho-biological Laboratory" for study and investigation into the nature and causes of contagious and infectious diseases affecting man and animals. The Bill provides for the proposed laboratory being under the control and management of the Surgeon-General of the Marine Hospital Services; the laboratory being divided into two institutes, the one for the investigation of human, the other of animal disease. The Surgeon-General is to select a director for each institute, each of which will also be furnished with a chemist. It is provided that a certain amount of accommodation be assigned to graduates of veterinary or medical colleges desirous of pursuing original research. The Bill proposes that the sum of $550,000 be appropriated from funds in the Treasury of the United States for the purchase of land in Washington and the erection of a suitable building.

MUCH indignation has arisen in medical circles in Vienna at the wholesale charges of corruption and immorality which were brought against the nurses and attendants of the General Hospital by Père Eichhorn, speaking in Parliament on the question of replacing the lay nurses by religious sisters (*L'Union Méd.*). A protest, signed by all the medical staff, has been forwarded to the President of the Chamber. Père Eichhorn's speech was made in the course of the debate on the Budget, when the question of improvements in the management of the General Hospital came up.

THE Brixton Liberal Association has forwarded to Dr. B. W. Richardson a request to address their committee with a view of standing as a candidate for the Brixton Division of the London County Council at the forthcoming election. To the proposition Dr. Richardson has replied that he would have been glad to accept the invitation, but feels he could not conscientiously perform the duties, if elected, whilst he is still actively engaged in professional work.

THE annual course of five lectures in connexion with the Brown Institution will be delivered at the University of London on the 28th and 30th of November, and the 3rd, 5th, and 7th of December, at 5 P.M. The subject of the five lectures will be "Epilepsy."

IT is reported that Professor D. Hayes Agnew will shortly resign the Professorship of Surgery in the University of Pennsylvania, and that Dr. Nicholas Senn of Chicago will be invited to succed him. Dr. J. Wm. White of Philadelphia has also been mentioned in connexion with the post.

THE members of the Glasgow University Club, London, dine together this (Saturday) evening, at 7 P.M., at the Holborn Restaurant, under the presidency of Lord Watson. The honorary secretaries of the club are Dr. Heron, 57, Harley-street, W., and Mr. J. R. McIlraith, Barrister at-law, 2, Essex-court, Temple, E.C.

WE regret to record the death on the 5th inst. of Dr. William Wallace, F.R.S.E., F.C.S., public analyst for the city of Glasgow. Dr. Wallace, who was in his fifty-sixth year, was the author of several works on hygienic and scientific subjects, and had held the office of public analyst since 1874.

THE *Journal of Ophthalmology, Otology, and Laryngology*, to be edited by Drs. G. S. Norton and C. Deady, is the title of a new quarterly periodical to be issued in New York, commencing in January, 1889.

SEVENTEENTH ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD.

THE general report issued by the Local Government Board contains, as usual, information relating to each of the large number of subjects with which that Board now has concern, and by no means a few of these have interest for the medical profession. Compared with the previous year, Jan. 1st, 1888, exhibited an increase of 1·1 per cent. in our pauperism, that increase being almost equally divided between in-door and out-door paupers; and, whilst our south-eastern counties contributed 42·2 paupers per 1000 population, the corresponding rate in the northern divisions of the kingdom ranged from 20·8 to 24·6; Dorset, at one extreme, having the unenviable position of providing 47·4 per 1000, whilst the county of Lancaster, at the other extreme, contributes only a rate of 20·2. The actual cost per head on the mean number of out-door paupers is much the same in the metropolis and in England and Wales generally—namely, about £4 12*s.*; but, whilst the corresponding cost for in-door paupers is somewhat over £10 for England and Wales, it is no less than over £20 for the metropolis, the difference being attributed, amongst other causes, to the improved accommodation provided for paupers in the metropolis and to the contributions paid by London parishes to the managers of the Metropolitan Asylum District. Dealing with the question of local government and public health, it is reported that, since the constitution of the Board, in August, 1871, a sum of £38,825,093 has been sanctioned in the way of loans to urban and rural sanitary authorities, by far the greater portion of which has been devoted to sanitary improvements. During 1887 the loans amounted to £2,103,026, of which £1,822,449 was borrowed by urban and £180,577 by rural authorities. In addition to these sums, £100,000 was borrowed during the year under the Artisans and Labourers' Dwellings Improvement Act (1875), and £171,235 by joint boards. Another item relating to finances deals with sanitary officers, and it appears that a moiety of the salaries of medical officers of health was paid from the Parliamentary grant in the case of 1205 districts, and as regards inspectors of nuisances in the case of 1094 districts, the total amount thus paid being £73,910, a payment which will for the future be made by the newly constituted county boards. Dealing next with defaulting authorities, concerning whose affairs inquiry had been held under the compulsory provisions of Section 299 of the Public Health Act (1875), the following cases are named: Cheshunt local board are making progress with their system of sewers, and it is advancing completion. Sandbach local board have adopted a scheme of water supply. Hinderwell local board have submitted a scheme of water supply, but there will be occasion to modify it. The Yeovil rural authority have applied for sanction to the formation of a special drainage district at Martock, and to the borrowing of money for the execution of a scheme of water supply. In the case of the rural district of the Bridge Union, concerning which the Canterbury Water Company made complaint, the Board have issued an order requiring them to do their duty as regards the provision of sewers. Fresh inquiries have been held during the year under the same section as regards Newport (Isle of Wight), Brigg, Clayton, New Shoreham, Oakworth, Seaford, Stone, and Sutton urban authorities, and Horsham, Leigh, Liskeard, Rochford, and Ware rural authorities. In many of these cases preliminary arrangements have been made to comply with the needed requirements. Compulsory orders requiring the sanitary authorities themselves to carry out the work of refuse removal, under Section 42 of the Public Health Act, have been issued in the cases of Chatham, Rochester, and Worksop; and, as the result mainly of a comprehensive inquiry made by the medical department of the Board during the recent European cholera prevalence, a large number of our port sanitary authorities have now been constituted permanently.

Passing over a large number of subjects relating to engineering inquiries, London water supply, audit, bye-laws, rivers pollution, &c., we come to a part of the report which always contains interesting matter—namely, that dealing with the Sale of Food and Drugs Act, 1875. During the year 24,440 analyses were made by approved analysts, that number being 850 more than in 1886, the proportion of analyses to population being 1 for every 596 persons in the metropolis, as against 1 to every 1228 persons in the provinces. In St. Giles' district one analysis was made for every 131 persons; whilst not a single sample was taken in the populous district of St. Mary, Newington, or in St. Martin-in-the-Fields; and in Islington, the largest of London districts, with a population of over a quarter of a million, one sample was analysed for every 2525 persons. Again, within the jurisdiction of the magistrates of Berkshire, Oxfordshire, and Pembrokeshire not a single sample was taken, and the municipal authorities of no less than seventy-two boroughs allowed the provisions of the Acts to be inoperative. In this way an aggregate population of over five millions in the provinces derived no protection from the Acts, and, though unfortunately this number includes some large boroughs which will constitute counties under the new Local Government Act, we cannot but rejoice that the power to give that protection which the public need against the practices of the tradesman will in a vast number of small boroughs be now transferred from the tradesman, in his capacity of either town councillor, alderman, or mayor, to the county boards. In over 80 per cent. of the cases taken into court the average fine was only about £1, and with such regrettable leniency no surprise is expressed that adulteration continues to a large extent unchecked. A table relating to the percentage of cases in which adulteration was reported includes the following: Spirits 18·1, butter 17·5, milk 14·9, coffee 13·3, pepper 11·0, and drugs 10·9; the proportion of all articles lumped together being about 13 per cent. Milk continues to be largely adulterated, and the contention of the retail trader that the addition of water is largely effected by the farmer is in at least one part of the country borne out, for in Manchester, where a rather elaborate system has been devised for taking samples at the various stages of the delivery, no less than fourteen out of thirty-five farmers' cans from which samples were taken at the railway stations were found to be adulterated. As to drugs, it is stated that of forty-eight adulterated samples twenty-three were of sweet spirits of nitre, and it is added that it is probable that in many of these cases there was no wilful adulteration, but that the spirit had been reduced below standard strength by evaporation. Of twenty-nine cases in which medicines professing to be prepared according to prescriptions were examined, there was only one in which there was an adverse report.

It is interesting to note that the system of compulsory notification of infectious diseases is steadily being extended. Last year it was reported that forty-three provincial towns had adopted the system, and in 1887 local Acts dealing with the same subject were also passed for Darwen, Wakefield, Weymouth, and Willesden. Bills are also pending to deal with the same matter as regards West Ham, Kingston-upon-Thames, Llanelly, and Nelson. The report adds that a large number of memorials have been received by the Board in favour of a general extension of the scheme, and that an inquiry, the results of which we have from time to time noted, has been made as to the effects of its working in the towns and cities where it is already in force. The resulting evidence has been, it is stated, almost entirely favourable to the system. A separate report will, as usual, be issued by the Medical Officer of the Board.

RELEASE OF CRIMINAL LUNATICS IN INDIA.

REPORT OF THE COMMITTEE APPOINTED BY THE BENGAL GOVERNMENT.

IN October, 1887, the Government of Bengal appointed a committee to investigate and discuss the issues involved in the important question of the disposal of the large and increasing class of criminal lunatics confined in the asylums and gaols of Lower Bengal. The committee consisted of Surgeons-Major Birch and Crombie, officers of practical experience in the management of lunatic asylums, and Mr. Larymore, superintendent of the Alipore Gaol. In their report, which was issued in January last, they discuss the question in three aspects—the legal, the medical, and the administrative.

1. *The legal aspect.*—The great bulk of the criminal population of asylums is confined under the provisions of Act X. of 1882. With regard to the accused persons found to be of unsound mind and incapable of making their defence, the procedure varies according to the nature of the offence. The committee are clearly of opinion that the division of such accused persons into two classes receiving different treatment, in accordance with the accident whether the offence of which they are accused is bailable or not bailable, is neither commendable nor reasonable. For instance, voluntarily causing grievous hurt is bailable, and voluntarily causing grievous hurt by dangerous weapons or means is not bailable. The committee not unnaturally object to a distinction of this sort whereby one class of criminal lunatic is let loose on society on the very unsafe security of a relative or friend, and the other confined for an indefinite period within the walls of an asylum. Moreover, it is stated that, from not being in possession of the facts necessary to the formation of a trustworthy opinion, the magistrate, even if he calls to his aid the civil surgeon, may not be able to come to a right judgment on the question of the safety of releasing a criminal lunatic on security; and the committee think that public safety requires that rules should be laid down for the guidance of executive officers in dealing with criminal lunatics under such circumstances. With regard to criminal lunatics who, after a period of detention in asylums, are declared to be sane and capable of making their defence, the committee think that the further procedure in such cases is open to grave objections, inasmuch as neither the court before which the case is to be tried nor the local government is in a position to judge whether any individual so situated ought to be remanded to an asylum or to a gaol, or be delivered over to the care and custody of a relative or friend. It is not known, either to the court or to the Government, what may have been the type of his insanity while under observation in the asylum. At the trial the person is no doubt usually acquitted on the ground of insanity, and sent back to the asylum under the provisions of the Act, but this is by no means always the case. From one asylum alone, in ten years as many as twenty-six recovered criminal lunatics were sent up for trial and not again heard of by the asylum authorities. The risks involved in such a mode of procedure are illustrated in the following instances given by the committee. A man aged twenty-two, suffering from melancholia, committed murder in 1874. He remained insane for six years, and had a short lucid interval in 1880, after which he again continued insane for three years. In March, 1883, after a period of nearly nine years' almost continuous insanity, this murderer was declared capable of making his defence. He was discharged for trial in the following month, and not again heard of. Another case of melancholia and murder was admitted in 1875, recovered, but relapsed in 1876 and 1877; was declared fit for trial in October, and was discharged for that purpose in December, 1878, and was lost sight of. Similar cases are numerous. Neither the magistrate nor the local government, in dealing with these two cases, were in a position to know what they had to do—in the first instance with a confirmed lunatic brought before them in a lucid interval, or in the second with a man subject to annual relapses. Had they been aware of the medical histories thus shortly detailed, both men would unquestionably have been returned to the asylum for a further and lengthened period of observation before final action was taken.

2. *The medical aspect.* — In Indian asylums, the committee tell us, the most dangerous are those suffering from (1) acute mania and (2) melancholia, the former being the most dangerous while the mania lasts, but the latter being the most untrustworthy. Chronic dements, unless they exhibit mischievous or filthy propensities, might often, or more readily, be released to the care of their friends on security were it not for the ordinary fate of this class of lunatic at home: it is the life of a dog; they are starved, beaten, and bound in chains. Those suffering from chronic mania accompanied by hilarity and delusions of well-being are not easily aroused to violence, and may have more freedom; but, on the other hand, when chronic mania shows itself in irritability and destructiveness, it is very untrustworthy, and leads to long detention in asylums, and thereby becomes the chief cause of the steady increase in the number of the criminal population in these institutions. Epileptic insanity causes the sufferer to exhibit violent and dangerous symptoms, especially immediately after a fit, and it is obvious that a man who has committed an offence against the person and shows irritability or violence after his epileptic fits, cannot safely be released from an asylum until there is reasonable hope that his epileptic habit has been permanently overcome. Insanity due to the pregnant or puerperal states is not liable to recur except under the same conditions of health. General paralysis of the insane is practically unknown among the natives of India. Hereditary and emotional insanity are likely to be more lasting and more liable to recur, without apparent reason, than when the result of other conditions. Such cases should therefore be detained for relatively longer periods in an asylum than others. On the other hand, intoxicants, such as ganja, alcohol, and opium, have more transient effects unless their use has been very long continued. Such cases recover speedily, and long detention in an asylum for observation and treatment is unnecessary. Chronic mania with relapses is generally due to ganja, but ganja never appears as a cause of melancholia. The detention or release of a criminal lunatic depends mostly upon the liability to relapse, and the committee enlarge upon the subject in this relation, giving much valuable information as the result of their investigations.

3. *The administrative aspect.*—The early periods of probation after apparent recovery from insanity ought to be passed in a lunatic asylum. The period for detention will vary according to the nature of the case. When ganja or other intoxicants enter as a cause, a period of three years of freedom from excitement is sufficient to remove the likelihood of relapses in the absence of the exciting drug to one of remote probability, and at the end of this period the propriety of transferring him to gaol may be brought up for consideration. If the case were one due to other causes, a longer test period would be necessary before removal to gaol. The committee favour the idea of promoting recovered criminal lunatics to the position of asylum overseers; but they do not think that promotion to the post of paid keeper in an asylum can be utilised so easily, and with so good a guarantee of testing permanent recovery, as that to the post of paid warder in a gaol. The recovered lunatic would live in outside quarters with the gaol warders, and be under the observation of a head warder. Subject to a variety of considerations, restrictions, and alternatives, the committee think that the transfer to gaol for employment in various capacities should be the regular procedure in the case of recovered criminal lunatics.

An immense mass of useful information of a practical sort is condensed within the limits of the business-like report of which we have given only a brief outline. While, on the one hand, the committee state that experience shows that a very large proportion of recovered criminal lunatics can be released with almost absolute safety, they insist throughout their report on the great necessity for caution in the disposal of them. Appended to the report are "rules for the guidance of executive and judicial officers in dealing with criminal lunatics," which are likely to prove of great utility. We give *in extenso* a summary of the practical conclusions at which the committee have arrived, and which are added to the report, after having met with the approval and authority of the Lieutenant-Governor of Bengal.

Principles on which the Local Government will act in disposing of the cases of Criminal Lunatics sent up for orders under Sections 466, 471, 474, and 475 of Act X. of 1882.

1. Final orders should not be issued unless the lunatic's papers are accompanied by the medical history sheet as suggested in Appendix I.

A.—Recovered Criminal Lunatics.

2. If the crime be against the person, the cause ganja or other intoxi-

cant, and the type of insanity acute or chronic mania, a period of three years should be spent in an asylum free from all signs of insanity before any action is taken. (*a*) At the end of that time, if under forty years of age and in good physical health, he should be transferred to the nearest central or other gaol, there to undergo a period of probation of six years, of which three had better be in the grade of paid warder. (*b*) If over forty years of age, or in poor physical health, the period of probation in gaol may be shortened according to circumstances of crime and nature of security offered. In any case security should, if possible, be taken on the expiry of his period of probation in gaol.

3. If the crime be an offence against the person, the type of insanity acute or chronic mania, and the alleged cause not ganja or other intoxicant, a period of at least four years of complete freedom from insanity should be spent in an asylum before action is taken. (*a*) At the end of that time, if under forty years of age and in good physical health, he may be transferred to a gaol, there to undergo a probation of four years, of which two should be in the grade of paid warder. (*b*) If over forty years of age, the period of probation in gaol might be shortened, according to circumstances of health and surety. Security should, if possible, be taken before his final release from gaol supervision.

4. If the crime be not an offence against the person, but the lunatic have at any time exhibited dangerous or violent tendencies, and the type of insanity is acute or chronic mania, he should be treated exactly as above, except that the period of probation in gaol may be shortened in accordance with the kind and degree of violence exhibited; always provided that in ganja cases the period spent as paid warder should be three years, and in non-ganja cases two years. In all, security should, if possible, be taken on final release.

5. If the crime be not an offence against the person, and there be no history that the lunatic was at any time aggressive, he may generally be treated much as if he were a non-criminal lunatic. As has been stated in Rule 7 for the guidance of executive officers, the local government will generally be guided in such cases by the recommendations of the visitors and of the superintendent of the asylum in which the lunatic has been confined.

6. If the type of insanity be melancholia, a period of at least six years' complete freedom from insanity should be passed in an asylum before action is taken. During the last year of this period the recovered criminal may be allowed access to the bazar under certain regulations. (*a*) If at the end of that period he is still under forty years of age, he should not be released except on excellent security. (*b*) If over forty years of age, security should, if possible, be obtained.

7. If the crime be attempt to commit suicide, and not murder, the type melancholia, and if he has not exhibited any violent tendencies while under observation, some relaxations of the rules may be permitted according to circumstances of age, period of detention, &c. Cases of melancholia should not be sent to pass a period of probation in gaol.

B.—Unrecovered Criminal Lunatics.

8. If the crime be an offence against the person, the type chronic mania of the irritable aggressive kind, it will seldom be possible to release the lunatic during the continuance of insanity, except in advanced age and on exceptional security. If the crime be an offence against the person, the type of insanity chronic mania of the amiable kind, a lunatic may be released after passing from six to ten years in that condition, but only on security. If below forty years of age, detention should generally be ten years; if over forty years of age, six years may suffice.

9. If the crime be not an offence against the person, or if an offence against the person of a trivial nature, and the lunatic has never exhibited aggressive symptoms, he may generally be treated much as if he were a non-criminal lunatic, and the local government, when dealing with his case under Section 474, will be guided chiefly by the recorded opinion of the superintendent of the asylum as to the propriety of releasing him, and by the recommendations of the visitors. (*a*) If his mental attitude be chronic mania, characterised by good humour, cheerfulness, and amiability, and he is able to earn a livelihood, he may generally be released with or without security. (*b*) If it be chronic dementia or imbecility of slight degree, he may be released on similar conditions. (*c*) If he be suffering from chronic mania of the irritable mischievous type, or chronic dementia of a more pronounced character, he may still be released, but only on satisfactory security that he will be properly cared for and prevented from doing injury to himself or others. (*d*) If the chronic mania be of inveterate type, or the dementia or imbecility of the last degree, the lunatic can only be safely and humanely treated in an asylum.

THE ITALIAN MEDICAL ASSOCIATION.

(From our own Correspondent.)

(Concluded from p. 933.)

Rome, Oct. 27th.

MONDAY'S (Oct. 22nd) forenoon sitting was chiefly important for the paper of Professor Cardarelli of Naples on the Treatment of the Functional and Nervous Disturbances of the Heart in its Organic Diseases. Starting from the thesis that all cardiac mischiefs commence with augmentation of the pressure in the chambers of the heart, with slackening of its beats and more vigorous contractions (hypersystolia), he pointed out that if the muscular fibre is unsound, if the nervous apparatus is abnormal, the heart does not resist the initial shocks, and that to the augmentation of pressure must succeed hypertrophy and dilatation. At this stage the physician must try to make the nutrition of the organ proportionate to its consumption. He contended that if cardiac therapeusis has not made equal progress with cardiac diagnosis, the fact is due to the practitioner not having given sufficient attention to the functional perturbations of the organ. He further maintained that the heart, labouring and becoming hypertrophied, consumes itself, and that the organic mischief gradually exhausts that reserve of energy which was capable of overcoming the physiological resistance (*le resistenze fisiologiche*). To measure the latent strength of cardiac muscle, he recommended the application of the tourniquet to the two crural arteries and the watching of the modifications produced in the sphygmographic tracings. When the heart is no longer capable of overcoming the blood pressure, it is the practitioner's duty to lower that pressure by graduated venesection. Nor should he be deterred by the depression which may follow. With the so-called "cardio-kinetics" the weary muscle can be aroused to fresh activity. Dr. Cardarelli concluded his elaborate paper by referring to the neural disturbances due as well to the paralysis as to the excitation of the vagus and the sympathetic—disturbances which occur accidentally in an impaired heart, and other disturbances which have a reflex origin. He was followed by Professor de Giovanni, who made a detailed criticism of the discussions lately held at the Wiesbaden Congress on Cardiac Gymnastic (*ginnastica cardiaca*), and maintained the necessity of treating certain sufferers from heart disease on the dietetic and mechanico-gymnastic method. To investigate the resistance of the heart he approved of two procedures: by hypodermic injections of strychnine in progressive doses, which excite the contractions of the whole circulatory system; and by expulsive bandaging (*fasciatura espulsiva*) of the extremities, which the patient feels irksome when the myo-cardiac tissue is unsound. He referred to sanguineous plethora and to serous plethora, which he used solely in an anatomical or somatic sense, and maintained that bloodletting was indicated in certain cases. Professor Rummo followed on the Pharmaceutical Treatment of Organic Heart Disease, demonstrating that the mechanism of the said treatment consists in proportioning the activity of the cardiac motor system to the power of the circulatory resistance (*resistenze circulatorie*) with the least possible expenditure of force.

The afternoon sitting was mainly occupied by Professor Murri's paper on Fever and Antipyresis, in which he raised the question whether the febrile process should be combated or not. He said that if there are elevations of temperature which depend on the action of the nervous system, there are also others with which the nervous system has nothing to do. This thesis he defended by the results of experiments on dogs and pigeons. He has even observed that after death the generation of heat receives notable augmentation from the injections of disease-producing or infective matter. He concluded by maintaining that fever is nothing else than a symptom in infective maladies, and that it ought not to be combated as a distinct disease. The discussion that followed was especially animated, Maragliano opposing and Cantani supporting Murri's doctrine. The President, Dr. Baccelli, summed up in the sense of treating the pyretic symptom *per se*, and in certain cases of hyperthermia he recommended the graduated use of cold compresses.

Tuesday's proceedings were confined in the main to Diabetes, on which a most instructive debate was started by Professor Cantani, of Naples. He defined the disease as a general malady, with localisation in the chylopoiëtic viscera. Discussing Ebstein's theory, he maintained that the reduced quantity of carbonic acid in the organism of the diabetic is the effect and not the cause of the morbid process—derived, that is to say, from the loosened combustion of carbo-hydrates. He traced the origin of diabetes to the abuse of farinaceous and saccharine alimentary matters, and held that glycosurias of nervous origin are rare and transient. This induction he sought to confirm by statistics of more than a thousand cases. A diabetic patient he considered as cured when he is capable of drawing nourishment from any diet without eliminating sugar. He recommended the alkaline lactates, a fatty and albuminous diet rigorously practised, and the use of alkaline drinking waters. Interesting comments were made on Cantani's paper by Cardarelli, De Renzi, Petrini, and others, till Professor Baccelli's summing up, which favoured the neural cause of the disease. In the gravid and puerperal states glycosuria of undoubted nervous origin has occurred. The desideratum, he said, is the demonstration of a nerve centre which regulates the course of alimentary metamorphosis. When such a centre is found, the pathogenesis of diabetes will be cleared up.

On Wednesday, the 24th, Professor Arnaldo Cantani presided, and read a paper by Baccelli on the results of experiments instituted with Hypodermic Injections of Phenic Acid in certain Neuralgias, like sciatica and hemicrania. In traumatic tetanus (with one centigramme every hour, followed by two centigrammes every hour) the patient improved in eight days and was cured. Professor Marchiafava came next with a series of notes on the Alterations which occur in the Red Globules by the penetration of Parasitic Microbes, which absorb their colouring matter and convert it into melanine. He was sustained by Mosso of Turin, and criticised by Maragliano of Rome, and, having replied, he was succeeded by the authors of other papers, of distinct, but of comparatively minor, interest. The afternoon sitting was occupied with a discussion on Hypnotism, which for the last year has prevailed with something like epidemic *furore* in Italy; and then followed the valedictory address of the President. The assembled Congress, through its authorised spokesman, congratulated the organising committee on its success, and augured still greater results from the congresses yet to come. In the meantime it is arranged that these shall continue to meet in *Alma Roma*, fortunate in possessing so able and accomplished a votary of medicine as Guido Baccelli.

I may add that a full and official report of the *atti* of proceedings, of which I have given a rapid sketch, will be published early in the coming year by the well-known house of Vallardi in Milan.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

OWING to want of space we were unable to publish in our issue of last week the full list of resolutions which were passed at the meeting of the Fellows and Members held on the 1st of November last. We now print them in full, together with the reply of the Council, which appeared on p. 944 of THE LANCET of Nov. 10th. They were as follows:

1. That, while welcoming some of the changes introduced by the Supplemental Charter, such as the extended eligibility of Fellows to sit in the Council and the increased facilities for voting at the election of members of Council, this meeting hereby expresses its regret that no provision has been made for giving effect to the recommendations contained in certain resolutions passed at a general meeting of Fellows and Members convened by the President for the purpose of receiving suggestions or recommendations respecting alterations to be made in the Charters, and held in the College on March 24th, 1884: namely, that Fellows and Members should be invested with a larger share in the management of the College; that no alteration should be effected in the constitution or in the relations of the College without the consent of Fellows and Members specially convened to discuss such alteration; and that the President of the College should be elected annually by the Fellows.

2. That this meeting of the Royal College of Surgeons of England is of opinion that it is necessary for the interests of the College that immediate steps be taken to proceed with the consideration of all the matters relating to the constitution and Charters of the College, and to the rights and claims of the Members thereof which have been under discussion in the course of the recent proceedings before the Privy Council referred to in the report, and to submit to the Privy Council, for embodiment in a further Supplemental Charter, proposals for the settlement of the said matters according to the general sense of the College; and that the Council of the College be invited to appoint a committee to consider, with representatives of the Associations of Fellows and Members of the College, the matters to be included in the petition for such further Supplemental Charter.

3. That the Council be respectfully requested to forward a copy of the foregoing resolution No. 2 to the Lord President.

4. That this meeting of the Royal College of Surgeons of England resolves that the Members and Fellows of the College ought to be consulted as to all extraordinary expenditure.

5. That this meeting having taken note of the privileges at present enjoyed by Members of the College, as enumerated in the reply of the Council to the Privy Council (pages 26 and 27 of the report), respectfully requests the Council to add thereto the right of meeting at convenient times within the College walls, for the purpose of discussing any questions relating to their position as Members in which they may be interested; and with this object the Council is hereby requested to enact a bye-law, instructing the Secretary, upon the receipt of a requisition signed by twenty Members (or Fellows and Members), to arrange with the Members forwarding such requisition a convenient day and hour (within one calendar month) at which such meeting may be held upon the College premises.

The following was the reply given by the Council at their ordinary meeting on the 8th:—"The Council regret that they cannot accede to the requests contained in the resolutions Nos. 2, 3, and 5. That it seems to the Council best in the interests of the College that the discussion on the subjects which have been in dispute should cease with the grant of the Supplemental Charter. That the Council cannot believe that any advantage is likely to arise from reopening questions which have been fully considered; and on behalf of the College they trust these questions will now be allowed to rest." The Council considered that resolutions Nos. 1 and 4 did not require any comment.

It was resolved that copies of these replies be forwarded to the movers of resolutions Nos. 2, 3, and 5 at the meeting of Fellows and Members.

A letter was read from Miss Johnstone, of Leamington, offering to the acceptance of the College an interesting letter from John Hunter, addressed to the late Dr. James Johnstone, of Kidderminster. The Council agreed to accept the letter.

The Council gave permission to the Library Association to hold one meeting in the library of the College.

The committee appointed to consider the desirability of Mr. Macnamara's motion concerning the inclusion of operative surgery in the final examination for the membership, which was seconded by Mr. Pemberton, is constituted as follows:—Sir W. Mac Cormac, Messrs. Bryant, Macnamara, and Hill, together with the President and Vice-Presidents.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria at Walthamstow, by Dr. AIRY.—In view of the excessive amount of diphtheria which is discussed in this report the information supplied must be regarded as somewhat meagre. In the last quarter of 1887 no less than 35 diphtheria deaths were registered, and there seems to have been an excess of death from this cause in the West Ham Union generally. It is also noteworthy that the large epidemic at Enfield reported on by Dr. Bruce Low occurred at the same time, but no connexion was traced between the two epidemics. The Shern Hall-street school, and also its neighbourhood, as to which there was complaint of bad drainage, seem to have been early identified with the disease; and then other streets, notably Hazlewood-road, were attacked, but the details given as to these streets do not enable a critical reader to judge whether or not there was any real cause for such localisation as is suggested. An account is given of the system of sewage disposal adopted, although it is not implied that this was connected with the disease; but some indication of the reporter's views as to a relation between diphtheria and drain air is conveyed by the prominence he gives to the existence in certain affected streets of the inefficient arrangement which is implied by the use of bell-traps. Where communication with the outside public was maintained, as in the case of the North London Truant School, not a case occurred; an event which points to the influence of personal contact as a cause of the infection. It is stated that in all probability some four hundred attacks occurred in Walthamstow in twelve months, and especial attention is drawn to the fact of an alarming increase of the death-rate from diphtheria in other sub-districts of the West Ham Union, as well as in adjacent neighbourhoods. The cause must be regarded as undetected, and the recommendations annexed to the report do not clear up the point, since they only indicate the need for repairs and flushing of sewers, and the desirability of having means of isolation and of disinfection.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

St. Luke's.—Dr. Yarrow finds difficulty in giving a correct estimate of the present population of St. Luke's on account of the great changes that have taken place since 1881 in the dwelling accommodation of the poorer classes, owing to the construction of artisans' dwellings on sites then unoccupied, to the destruction of other blocks, and to the altered use to which a number of buildings are now put. But, adding the excess of births over deaths to the then population, he gives that for 1887 as 51,943, and on this estimate the birth-rate was 32·4 and the death-rate 21·3 per 1000. He refers to certain considerations which lead to the conclusion that there is in progress a steady improve-

ment in the condition of the parish, and he points to the efforts made to control the spread of infectious diseases. Adverting to this latter point, he refers to the state of opinion as to the compulsory notification of infectious diseases, a system which has in principle received the support of St. Luke's vestry. A new mortuary and disinfecting chamber are all but completed in connexion with the coroner's court; but there is still need for a destructor, in which to deal with such bedding, clothing, &c., as cannot be properly disinfected or returned to their owners.

St. Matthew, Bethnal-green.—The death-rate for this parish during 1887 was 22·45 per 1000, which, though 1 per 1000 below that of the preceding year, was considerably above the rate of 19·6 for the metropolis generally, and also in excess of the rate of 21·9 for the eastern districts of London. The infantile death-rate amounted to 163 per 1000 registered births; and the zymotic rate to 3·20 per 1000 living. Scarlet fever, although somewhat widely prevalent, led only to 61 deaths, as opposed to a decennial average of 93. After dealing with the question of the infectious fevers, Dr. Bate draws attention to the fact that a special committee of the vestry decided to enter into joint action with other vestries who, at the instance of Kensington, were anxious to press the matter of the compulsory notification of infectious diseases on the Government; but when the matter came before the vestry as a whole, they declined to take any action in the matter. Dr. Bate regrets this action as tending to hinder the work of checking epidemic diseases. As to the dwellings of the poor and the labouring classes, Dr. Bate takes occasion to point out the methods of procedure under the Nuisances Removal Acts and the Artisans and Labourers' Dwellings Acts, and he gives his reasons for preferring action under the latter, although their provisions tend to make the matter tedious and cumbersome. One point is specially adverted to, and that is the absence of a surveyor's specification as to the needed amendments under the Nuisances Acts, as to which Dr. Bate explains that, though a medical officer of health should always be capable of pointing out the evil conditions which tend to nuisance and to injury to health, it is not properly his vocation to enter into the constructive aspect of the remedy called for.

Brighton and Hove.—Quarterly reports dealing with comparatively small populations are not, as a rule, of great value in so far as their statistics are concerned; but it is noteworthy that the death-rates for Brighton and Hove were exceptionally low during the quarter ending September 30th last. The rate at Brighton amounted to an annual rate of 13·86 per 1000 living, which is lower than any for some years past. Dr. Newsholme admits that this was doubtless largely due to the low temperature and the excessive rainfall, but he claims that vigilant and unceasing sanitary work also had its share in producing the result. The zymotic rate was 2·20 per 1000, which is by no means so exceptional, and the deaths producing it were largely due to summer diarrhœa, some of which was found to be associated with that "putrefying dirt" to which it is so properly ascribed in the report; and we are glad to see that such conditions as cesspool nuisance, choked and foul closets, and closets without water are prominently referred to as connected with the disease, since such publicity is the best guarantee that they will be got rid of; indeed, much of the work needed to this end is stated to be in progress. At Hove the rates, calculated on a population of 27,000, were still more satisfactory, the death-rate from all causes being 9·4, and the zymotic rate 0·4 per 1000. Three deaths make up the latter rate—namely, two from whooping-cough and one from enteric fever; the latter being due to other causes than local sanitary defects. Dr. Kebbell adds that, so far as his information goes, Hove is at present especially free from all forms of infectious disorders.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6025 births and 3430 deaths were registered during the week ending Nov. 10th. The annual rate of mortality, which had been 21·8 and 19·6 per 1000 in the preceding two weeks, further declined last week to 19·0. During the first six weeks of the current quarter the death-rate in these towns averaged 20·1 per 1000, and was 0·4 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 12·2 in Nottingham, 12·9 in Hull, 14·0 in Wolverhampton, and 14·6 in Leicester. The rates in the other towns ranged upwards to 24·8 in Bolton and in Preston, 25·0 in Blackburn, 25·5 in Manchester, and 25·6 in Newcastle-upon-Tyne. The deaths referred to the principal zymotic diseases, which had been 472 and 467 in the preceding two weeks, further declined last week to 432; they included 188 from measles, 57 from diarrhœa, 56 from scarlet fever, 45 from diphtheria, 44 from "fever" (principally enteric), 40 from whooping-cough, and only two from small-pox. No death from any of these zymotic diseases was registered last week in Plymouth, whereas they caused the highest death-rates in Blackburn, Cardiff, and Salford. Measles showed the greatest mortality in Blackburn, Portsmouth, Leeds, and Cardiff; scarlet fever in Manchester, Salford, and Blackburn; "fever" in Oldham, Newcastle-upon-Tyne, and Salford; diarrhœa in Bolton, Cardiff, and Derby; and whooping-cough in Birkenhead. The 45 deaths from diphtheria in the twenty-eight towns included 34 in London, 6 in Salford, and 2 in Liverpool. Small-pox caused one death in Preston and one in Hull, but not one in London or in any of the twenty-five other great towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital contained no small-pox patient during the week. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 969, against 1009 and 1007 in the preceding two weeks; 85 cases were admitted during the week, against numbers declining from 119 to 71 in the previous four weeks. The deaths referred to diseases of the respiratory organs in London, which had been 522 and 441 in the preceding two weeks, further declined last week to 373, and were 60 below the corrected average. The causes of 62, or 1·8 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Bradford, Sunderland, Nottingham, and in nine other smaller towns. The largest proportions of uncertified deaths were registered in Liverpool, Salford, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·4, 19·8, and 18·7 per 1000 in the preceding three weeks, rose again to 19·1 in the week ending Nov. 10th; this rate exceeded by 0·1 the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged from 11·2 and 12·3 in Perth and Edinburgh to 23·0 in Greenock and 36·3 in Paisley. The 484 deaths in the eight towns showed an increase of 11 upon the number in the previous week, and included 27 which were referred to measles, 9 to scarlet fever, 9 to whooping-cough, 9 to diarrhœa, 8 to "fever" (principally enteric), 8 to diphtheria, and not one to small-pox; in all, 70 deaths resulted from these principal zymotic diseases, against 82, 69, and 56 in the preceding three weeks. These 70 deaths were equal to an annual rate of 2·8 per 1000, which exceeded by 0·4 the mean rate from the same diseases in the twenty-eight English towns; the rate in the eight towns ranged from 0·0 and 0·2 in Perth and Edinburgh to 6·1 in Greenock and 18·5 in Paisley. The fatal cases of measles, which had been 26 and 23 in the preceding two weeks, rose last week to 27; of these, 20 occurred in Paisley, 4 in Glasgow, and 3 in Greenock. The 9 deaths from scarlet fever (an increase of 8 upon the number in the previous week) were all returned in Glasgow. The 9 fatal cases of whooping-cough also showed an increase, and included 7 in Glasgow. The deaths attributed to diarrhœa, however, which had been 27, 15, and 20 in the preceding three weeks, declined last week to 9, of which 5 occurred in Glasgow and 3 in Aberdeen. The 8 deaths from "fever" exceeded the number in any recent week, and included 3 in Glasgow and 3 in Greenock; and of the 8 fatal cases of diphtheria, 3 also occurred in Glasgow and 3 in Greenock. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 114 and 98 in the preceding two weeks, further declined last week to 84, and were 23 below the number in the corresponding week of last year. The causes of 51, or rather more than 10 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 21·9 and 24·4 in the preceding two weeks, further rose to 27·5 in the week ending Nov. 10th. During the first six weeks of the current quarter the death-rate in the city averaged 24·2 per 1000, the mean rate during the same period being 19·1 in London and 15·6 in Edinburgh. The 186 deaths in Dublin last week showed a further increase of 21 upon the numbers in the previous two weeks; they included 10 which were referred to "fever" (typhus, enteric, or ill defined), 4 to whooping-cough, 3 to diarrhœa, 3 to measles, 1 to diphtheria, and not one either to small-pox or scarlet fever. Thus 21 deaths resulted from these principal zymotic diseases, against 25 and 21 in the previous two weeks; these were equal to an annual rate of 3·1 per 1000, the rate from the same diseases being 2·5 in London and 0·2 in Edinburgh. The deaths referred to "fever" corresponded with the number in the previous week, and the fatal cases of the other zymotic diseases did not materially differ from those returned in recent weeks. The deaths of infants showed a decline, while those of elderly persons exceeded the number recorded in any week since the end of March last. Four inquest cases and three deaths from violence were registered; and 55, or nearly a third, of the deaths occurred in public institutions. The causes of 16, or nearly 9 per cent., of the deaths in the city were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.—Surgeon-Major William Henry Garde is granted retired pay.

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon and Honorary Surgeon-Major Cornelius Scamp Hall, 1st Volunteer Battalion, the Border Regiment, to be Surgeon-Major, ranking as Lieutenant-Colonel.

ADMIRALTY.—The following appointments have been made:—Maxwell Rodgers, M.D., Deputy Inspector-General of Hospitals, to Haslar Hospital (dated Nov. 12th, 1888); Surgeon R. W. Anderson, to Plymouth Hospital, and Surgeon William G. C. Smith, to the *Asia* (both dated Nov. 11th, 1888).

Correspondence.

"Audi alteram partem."

TUBERCULOSIS A CAUSE OF INFANTILE MORTALITY.

To the Editors of THE LANCET.

SIRS,—In the paper of Dr. Landouzy in the *Revue de Médecine*, on which you comment, tuberculosis is reckoned as one of the chief causes of death among the infants of Paris. This high mortality, it is maintained, is due not so much to inheritance as infection, and, in the view of the author, "tuberculosis in the earliest years of life may be regarded as '*bacillosis*,' disguised under some inflammatory affection, such as pneumonia or bronchitis, with which it may be associated." Before reading your remarks I was not aware that there existed either in this country or in France "an impression as to the comparative rarity of tuberculosis in the very young." That such an impression is erroneous is abundantly shown by the statistics of our own Hospital for Sick Children, which corroborate those of Dr. Landouzy, both as regards rate of mortality and parental inheritance.

Some time ago I consulted the post-mortem records of the Children's Hospital upon two points: one, the mortality of acute tuberculosis in reference to age; the other, the proportion of tubercular parents amongst children dying of tubercle. The results may be here summarised: Of 1420 deaths from all causes, at ages varying from infancy to twelve years, 434 were deaths from tubercle; while of 133 children dead of acute tuberculosis, taken consecutively, only 24 were over five years old. It appeared further that children dying of general tuberculosis under five years were to those dying from five to twelve years in a proportion of 9 to 2. Considering the very small percentage of infants that come under inspection post mortem in this country, as well as the common practice to which you allude of attributing death in infants who are not so examined to "the local affection rather than the underlying primary disease," it seems probable that our statistics in reference to the frequency of tuberculosis in infancy, grievous as they are, fall far short of the reality. It is otherwise with inheritance. We have here, according to common belief, a main factor in the production of tuberculosis. Yet, to my surprise, it dwindles into insignificance when closely scrutinised. Thus, according to the careful records from which I am quoting, 204 children dead of tuberculosis, all verified by post-mortem examination, had both parents healthy in 107 (more than half). In 44 cases one parent was reported phthisical, and in but one instance of the whole series were both parents consumptive. Tubercular disease is so common amongst us that it would be bold to say that a record like this exhibits inherited tubercle in excess of the normal proportion.

And, while the investigations of Dr. Landouzy in Paris are fully borne out by the experience of London, both as to the commonness of infantile tuberculosis and as to its being acquired rather than inherited, we may hold with him yet further in his remarks upon insanitary dwelling and improper food as common causes of the disease. All that is of practical moment may thus be conceded, and this without admitting the implied origin of the disease in question, or agreeing in the author's opinion that "tuberculosis in the earliest years of life may be regarded as '*bacillosis*.'" It is true that whatever applies to tubercle, as regards its nature and origin, might seem to apply in a special degree to the general tuberculosis of early life, where the granulations from which the name is derived are widely diffused throughout the body, with no preference for any particular organ. In the rapidity of its course, in its likeness to an infective fever, in the absence of phthisis and sometimes even of pulmonary inflammation or change of any kind, we recognise a general disease which may or may not involve the lung. But, however it may seem that infantile tuberculosis in this its pure form affords the best material for such research, the actual fact is that investigation in regard to bacilli is mainly directed elsewhere and to a narrower field. It is directed, that is to say, to pulmonary phthisis, to softening lung, whether tubercular or not, to the sputum of persons suspected of consumption. To adopt, therefore, the term "bacillosis" as an equivalent for acute tuberculosis would not merely involve a gratuitous assumption; it would imply, besides, that the disease in question is necessarily associated with lung changes, and confuse this general affection of infancy with tubercular phthisis, which as life goes on tends more and more to the respiratory organs.

I am, Sirs, yours truly,

Wimpole-street, Nov. 12th, 1888. OCTAVIUS STURGES.

*** Dr. Sturges' letter is a valuable corroboration of Dr. Landouzy's inferences. Certainly infantile tuberculosis is a far commoner affection than it is generally believed to be. Without any wish to adopt the term "bacillosis," we may point out that Landouzy's contention is based on the theory that tuberculosis is invariably caused by the bacillus; and the existence of a stage between infection and the formation of the typical tubercle granulation is theoretically conceivable.—ED. L.

"REFORM AT THE ROYAL COLLEGE OF SURGEONS."

To the Editors of THE LANCET.

SIRS,—I am instructed by the Central Committee of the Association of Members of the Royal College of Surgeons of England to inform you that they have directed me to forward to the Lord President of the Privy Council copies of the resolutions passed at the meeting of the College on the 1st inst., as also of the resolutions which the President of the College refused to put to that meeting. I would take this occasion also to express our disapproval of the high-handed manner in which the College Council has, while the ink in which the resolutions were written was scarcely dry, set them aside. This act on their part has come as no surprise, for we are by this time accustomed to the autocratic action of the Council; yet

it seems scarcely decent that motions carried almost unanimously at a full meeting of the corporation should be overruled after what can at the best have been but a hurried discussion on the part of the Council, seeing the amount of business crowded by it into the work of the afternoon of the 8th inst. The College Council "trust that these questions will now be allowed to rest," for "they deem it best, in *the interests of the College*, that the discussion on the subjects which *have been* in dispute *should close with* the grant of the Supplemental Charter." Truly an impotent conclusion; the subjects *are still* in dispute, unless the Council agree that the Members have convinced them of the justice of their claims, for the Members have not been silenced by any of the frothy occasional utterances of the Council; the "dispute" cannot *close with* the grant of the Charter, seeing that it has already been extended beyond that ideal landmark of the Council, and the Council have not yet proved that they have the remotest idea of the *best* interests of the College, or they would not so lightly have sent up to the Privy Council a draft Charter from which the latter body insisted upon some most important excisions. The Council may think that it has now before it a long period of undisturbed repose, but as yet the storm has but been brewing. We have not only Lord Randolph Churchill and Sir Guyer Hunter on our side in Parliament, but an exceedingly strong body of members belonging to both political parties in the House, and action will immediately be taken to gain at the hands of the representatives of the people that representation which must find its justification and precedent in the very constitution of the House of Commons itself.

I am, Sirs, your obedient servant,

WM. ASHTON ELLIS,

Grosvenor-road, S.W., Nov. 1888. Joint Hon. Sec. Assoc. M.R.C.S.

MENSTRUATION AFTER REMOVAL OF BOTH OVARIES.

To the Editors of THE LANCET.

SIRS,—The point raised by Mr. Thornton, Mr. Meredith, and Mr. Barwell as to the arrest of the menstrual function as a sequence of the removal of both ovaries is open to different interpretations. Mr. Thornton and Mr. Meredith agree that "when both ovaries are *entirely* removed no recurrence of menstruation could occur." Mr. Barwell relates a case in which he and Mr. Sheild are certain that both ovaries were removed, "not the minutest part being left behind"; yet in this case the subject "has menstruated regularly just as she used to do before the operation."

Mr. Barwell's case does not stand alone. I have seen similar instances; but they do not invalidate the hitherto accepted law that the determining cause of menstruation resides in the ovaries. The occasional recurrence of menstruation after the loss of both ovaries may be explained in various ways. First, after the menstrual function has been fairly started during health, and the influence of periodicity upon the constitution has been established, it is quite in harmony with physiological law that a flow of blood representing menstruation should sometimes return after the removal of the ovaries. Every month we note an exaltation of nervous and vascular tension, which culminates in the menstrual flow and then subsides. Habit tends to keep up this order of events. The dominion of periodicity is one of the most interesting and instructive problems in biology. It must be considered in this connexion. Secondly, it is certain that a periodical discharge, assumed to be menstrual, more or less regular as to time and quantity, is frequent after the ordinary climacteric, when the ovaries have become atrophied and inert. The flushes and nervous phenomena attending it indicate the periodical exaltation developed in the age of ovarian integrity. Thirdly, in some cases a morbid stimulus persists in diseased ovaries for some time after the abrogation of their normal physiological function. Fourthly, in some cases there is a complication with uterine disease, as myoma or hyperplasia, which keeps up a determination of blood to the pelvic vascular system, and so discharges more or less strictly periodical recur for a time even after the removal of both ovaries. But in the majority of cases in which the ovaries are removed with the tubes, the hæmorrhagic discharges, menstrual or pathological, cease. On the other hand, I know of no case in which menstruation has been established where the ovaries have been congenitally wanting.

We must not then, without more abundant proof than the evidence of an occasional apparent exception, abandon the old law, which declares that the ovaries rule over the function of menstruation. I will not now discuss what share the tubes may claim.

I am, Sirs, yours obediently,

Harley-street, November, 1888. ROBERT BARNES.

To the Editors of THE LANCET.

SIRS,—I assisted Dr. Aveling in removing both ovaries more than two years ago, and the patient has menstruated regularly since.—I am, Sirs, your obedient servant,

West Cowes, Nov. 12th, 1888. STEPHEN NOCKOLDS.

MEDICAL APPRENTICESHIP AND PRACTICAL TRAINING.

To the Editors of THE LANCET.

SIRS,—It is now some twelve months since a committee of the Medical Council recommended such a change in medical training as would ensure on the part of the young idea a greater acquaintance with the details of practice as well as more complete clinical knowledge. The committee appears to have been led to this recommendation by the repeated statements made as to the incompetence of at least many of the young practitioners educated under the present system to take sole charge of the sick. These allegations have been made over and over again by practitioners who have had to deal with assistants, and whose words are as reliable as those of any members of the profession. The committee must have felt that the charge rested upon very good evidence when, notwithstanding their personal interest in the present system, they gave to it such practical attention. Then there was the further question of utilising the immense amount of clinical *matériel* now running to waste in the union and other hospitals, and that at a time when even interested visitors were obliged to admit that the recognised *matériel* was in many places too scant. On this point something of the nature of an undertaking was given to the Privy Council that this unused *matériel* would no longer be allowed to run to waste. Most distinctly an expectation, at all events, was held out to that effect by the General Medical Council. Well, the outcome of all this was the following resolution, which was carried by the Council at its meeting of May 26th, 1888:—"That in addition to the requirements at present in force with respect to hospital attendance and duties, all candidates for the final examination be required to produce evidence that they have, under proper supervision, taken part as pupils for six months in the practice of a recognised public dispensary, including the visitation of patients at their own homes, or in the out-patient practice of a recognised hospital, or have acted for six months as pupil to a registered practitioner either holding such a public appointment or having such opportunities of imparting practical knowledge as shall be satisfactory to the examining bodies." This was the outcome of much labour on the part of that august and most expensive body, and I repeat here what I publicly stated before, that it is a perfectly illusory arrangement. It is illusory because by placing the out-patient department athwart the new apprenticeship system it so handicapped the latter as to practically prevent students adopting it. Why should a student become an apprentice when he need only present a certificate of attendance on that out-patient department which he always has been attending? How will the mere presentation of such a certificate supply that practical training which the attendance itself has heretofore failed to supply? Moreover, it is notorious that the conceit of the belectured student is such, and he is so utterly unconscious of his own ignorance, that nothing short of compulsion will make him serve an apprenticeship at the end of his course. I have myself had some experience in teaching having been for six years a private teacher in a medical school, and, with every respect for the opinions on the other side, I venture to express the matured conviction that it is at the commencement and not at the end of the course this apprenticeship should be served. I would make it twelve months; would recognise only those masters who

would furnish proof of the possession of the necessary capacity and means for teaching; and to prevent frand I would require that each apprenticeship should be entered in the Students' Register from the very date of its commencement.

Here I may be allowed to quote Carlyle: "Properly thou hast no other knowledge but what thou hast got by working; the rest is yet all a hypothesis of knowledge; a thing to be argued of in schools, a thing floating in the clouds, in endless logic-vortices till we try and fix it." The Chelsea philosopher had clearly in his mind's eye the difference between the apprentice and the poor bedazed and bewildered youth whose head is stuffed in the lecture room with that garbage which Carlyle so heartily despised. It is very suggestive that the opponents of early apprenticeship are almost in every instance persons who have a personal interest in opposing it. On the other hand, it is cheering to find a man like Sir James Paget urging home the lesson of early apprenticeship whenever an opportunity is afforded to him. It is well known that the late Dublin scheme offered special inducements, or at least offered a clear stage, for the reintroduction of early apprenticeship; but the moment it was found likely to take, the Dublin grinding interest strangled it. The other day I urged Dr. Kidd to restore it, and, in reply, he informed me that there was not the least chance of doing so, adding the significant words, which every parent and every intending student ought to be made aware of: "*I wish students and their friends could be induced to establish it for themselves.*" I am sadly afraid that there is a percentage of the professional masses to whom the term "professional rabble" would not be inapplicable, for in no other way can I account for the blindness and the apathy which they display in matters vitally affecting themselves. Just look at the treatment the Privy Council the other day extended to the Members of the College of Surgeons. Would they for a moment treat the licensed victuallers, or the trade unionists, or the association of chimney sweeps with like contumely? The fact is, that medical men do not take that part in civic and political work which mere duty of itself requires of them, and hence one great reason why we are so helpless in Parliament. The privileged schools, hospitals, and licensing authorities, I hope, will be made to feel the power of the professional masses, expressed through their Parliamentary representatives, the first time that a general election shall place a democratic Government in office.

I am, Sirs, yours faithfully,

Cashel, Nov. 10th, 1888. THOMAS LAFFAN.

SHAKSPEARE AND HARVEY.

To the Editors of THE LANCET.

SIRS,—I have read with much interest a few of the communications in your columns relative to the immortal Bard antedating Harvey in the discovery of the circulation of the blood, and also the possibility of Shakspeare being possessed of the knowledge of Harvey's theory, either by gaining information direct from Harvey or from the rumours that were abroad concerning it from the time that Harvey made the discovery to the publication thereof.

> "What damned error, but some sober brow
> Will bless it, and approve it with a text."

Of all claims of Shakspeare's priority, that of his knowledge of the circulation of the blood previously to its discoverer's, while attracting the widest attention, is yet the most assailable. Mr. Hackett, who in 1859 first called attention to and upheld it, shows not only his ignorance of the most important part of Harvey's theory, but his utter lack of knowledge concerning the many other theories that had been presented years before and were accepted at the time Shakspeare wrote by different physicians.

Shakspeare died in 1616. Harvey first published his theory in 1619. Among the older theories were those of Hippocrates, Praxagoras, and Erasistratus, who held that the arteries contained air, and that therefore the *veins* were the *only* blood-holding vessels, and that they had their origin in the liver. Galen, the most celebrated of ancient medical writers, who lived as early as 150 A.D., taught that the left ventricle of the heart was the common origin of all arteries, and that the arteries of living animals contained blood, *not* air; but he did not advance with his studies so as to learn in what direction the blood flowed, or whether it was movable or stationary. The distinguished Michael Servetus, who was burned with his books by order of Calvin in 1553, taught that the blood flowed from the right ventricle through the pulmonary artery to the lungs, and thence through the pulmonary vein and left auricle into the corresponding ventricle, from which it was conveyed by the aorta to all parts of the body. Sylvius had already pointed out the valves in the veins, and with this fact, together with the discoveries of Galen and Servetus, Harvey had his way well paved for the setting forth of the theory which rendered his name immortal. There is not one thought to be found in Shakspeare in any way relating to the circulation of the blood that is not applicable to the teachings of either Hippocrates, Galen, Servetus, or Sylvius, and it is very evident that he did not tie himself down to any one of these theories, but that sometimes he had in mind the theory of Michael Servetus (to which all the heart allusions will apply), and at other times that of Hippocrates, which accounts for all the thoughts regarding the liver as the propeller of the blood through the veins. Harvey was the first to show the true idea of the circulation, his chief points being that the left ventricle of the heart, acting as a muscular sac, forced the blood into the arteries; that it went to the extreme parts of the body and returned by way of the veins to the right auricle, thence to the right ventricle, from which it was squeezed into the lungs, and thence to the left auricle and corresponding ventricle, the same blood making a complete circuit, and ready again to be sent out on its life-sustaining journey; that the pulse is produced by the arteries being filled with blood and so enlarging, and that it coincides with the contraction, not the dilatation, of the heart. It is easy to see that many of Shakspeare's thoughts on the circulation might be made to apply to Harvey's theory, and he who is ignorant of the discoveries of the physiologists preceding Harvey might be led into the "damned error" which (to him) would rob the discoverer of his deserved honour.

I am, Sirs, yours faithfully,

Easton, Pa., U.S.A., Oct. 30th, 1888. B. RUSH FIELD, M.D.

THE CHEMICAL INCOMPATIBILITY OF ANTISEPTIC AGENTS.

To the Editors of THE LANCET.

SIRS,—In a communication under the above heading to a contemporary,[1] I pointed out that, granted the advisability of employing antiseptic agents in solutions of definite strength, the possibility of reducing the strength of the solution, or of altering its nature through the chemical incompatibility of the materials employed, is one of considerable moment. Taking corrosive sublimate, carbolic acid, iodine, salicylic acid, and Condy as examples, I showed that many instances occurred in which, when brought into contact one with another or with certain lubricants, chemical action took place. Carbolic acid and iodine afford one of these instances.

Dr. Percy Boulton, in THE LANCET of Nov. 3rd, speaks from clinical experience in defence of this combination. I do not pretend to say that the substance formed, whatever it may be, *is* antiseptically inert. It may be, as Dr. Boulton suggests, a colourless salt, which possesses antiseptic properties even more powerful than the iodine and phenol from which it is produced. But if so, let the substance be isolated, and let us know something of its chemical and physical as well as of its antiseptic properties. I cannot, however, accept Dr. Boulton's clinical experience, extensive though it is, as conclusive evidence in favour of its antiseptic power; and for this reason: *the substance*, as employed by him, *is not in an isolated condition*. In my paper I pointed out that an exceedingly small admixture with phenol is sufficient to fix the whole of the free iodine. Dr. Boulton's prepared solution, though it *contains no free iodine*, possesses undoubted antiseptic properties, for it *does contain uncombined carbolic acid*, a very small proportion of which is altered. Upon these two points direct evidence may be obtained. The disappearance of the iodine colour is in itself a proof that no free iodine remains. Inability to produce the blue iodide of starch by the addition of starch paste, and failure to impart a violet

[1] Brit. Med. Jour., April 28th, 1888.

colouration to a drop of bisulphide of carbon shaken up with the solution, confirm this. The presence of carbolic acid can be detected both by its odour (*no* smell of iodine remains) and by the purple colouration produced on the addition of perchloride of iron solution.

The question arises—What has become of the iodine? In Dr. Boulton's procedure it is the addition of *hot* water, not of carbolic acid, that vaporises the iodine. The addition of carbolic acid fixes what free iodine has not been already vapourised. That such is the case can readily be proved by comparative experiment. Take two vessels of the same size and shape, and pour into them equal quantities of the iodine solution. To one add a solution of carbolic acid in the proportion given by Dr. Boulton, to the other a similar quantity of water, and without loss of time loosely cover each for fifteen seconds at a time with paper moistened with starch solution. In the one very little blue colouration is produced, even at first; this becomes less and less, and finally ceases after a minute or so, when the solution becomes quite decolourised. Whereas, in the other, successive coverings continue to acquire a deep-blue colouration. This proves that *by the addition of carbolic acid the iodine is not vapourised.* Meanwhile the solution, to borrow Dr. Boulton's apt expression, has become as clear as drinking water, and now gives no reaction either with starch paste or with carbon disulphide. This shows the absence of free iodine. Moreover, the solution may now be boiled without vapourising the iodine. Therefore I maintain that *the iodine has entered into some combination and become fixed.* What that combination is I am not prepared to say, but it seems to me probable that iodine in presence of carbolic acid may be capable of taking away the hydrogen from water and liberating the oxygen, which in some way combines with the latter. That the carbolic acid undergoes some change is rendered evident by another comparative experiment. If equal quantities of carbolic solution be placed in two test tubes, and to one be added iodine solution in such quantity that all the colour disappears, and to the other a corresponding volume of water, and subsequently perchloride of iron drop by drop to each till no further purple colouration is produced, the colour will be found to be deeper in the tube to which no iodine has been added. But I am led especially to suggest this view of the reaction by the fact that, where spirit instead of water, or even concentrated solutions in water, are employed, carbolic acid fails to decolourise iodine, and also from the circumstance, which was indicated in my original communication, that one part by volume of carbolic solution (1 in 20) is just sufficient to remove the whole of the free iodine from 2000 parts by volume of iodine solution (tincture of iodine, B.P., one drachm to the pint), equal to 1000 parts by volume of the iodine solution employed by Dr. Boulton. In other words, 1 part by weight of pure phenol will decolourise 1000 parts by weight of solid iodine—a disproportion so great as to render direct union or other simple reaction improbable. I put this view forward, however, merely as a suggestion. I do not, I repeat, claim any precise knowledge of the bodies produced, some of which may, for all I know, possess powerful antiseptic properties. But should one of them prove to be hydriodic acid, let us use a solution of hydriodic acid pure and simple, and of definite strength, in order to test its efficacy, and proceed in the same way with the other bodies. On one point I can speak with absolute certainty: Dr. Boulton's solution, chemically considered, is not one of "decolourised *iodine*." The italics are mine.

In conclusion, I would remark that Dr. Boulton's procedure comprises two stages: first, the addition of iodine to hot water, whereby a portion of the iodine is vapourised—of decided value, no doubt, as far as disinfection of the atmosphere and of clothes is concerned, but by no means calculated to increase the potency of the solution, and therefore beside the main issue; second, the addition of carbolic solution to the deteriorated iodine solution, whereby the whole of the remaining free iodine is fixed, and a small quantity of carbolic acid destroyed, with the production of one or more bodies of which the nature is unknown and the antiseptic powers undetermined. Had Dr. Boulton employed a solution in which the addition of carbolic acid was just sufficient to decolourise the iodine and no more, he would have been in a better position to speak from clinical experience of the hypothetical "carbolate of iodine" produced; but I would remark that it has taken many years of clinical experience to reveal the fact (which is scarcely yet fully appreciated) that carbolised oil in the proportion of 1 in 20 is little, if at all, superior, from an antiseptic point of view, to olive oil alone—i.e., *minus* carbolic acid; whereas a little chemical (which I have in part supplied) and bacteriological research (which Koch of Berlin has supplied) would at once have afforded a key to the matter; and, further, that if the antiseptic properties of a solution are destroyed or deteriorated by chemical action outside the body, it is highly improbable that they will be restored to it when brought into contact with the tissues of the body.—I am, Sirs, your obedient servant,

ROBERT BOXALL, M.D., M.R.C.P. Lond.

Cambridge, Nov. 3rd, 1888.

SACCHARIN.

To the Editors of THE LANCET.

SIRS,—As the discoverer of saccharin, I should lay myself open to the charge of ingratitude if I did not tender to you the expression of my sincere appreciation of the spirit of fair play and judicial impartiality which has prompted you to open the columns of your esteemed journal to a discussion of its properties.

If saccharin could be proved injurious to man, I would ask your readers to accept my assurance that I would not be responsible for the manufacture of another ounce. It will be conceded that its production has involved a long and arduous study of the more complicated problems in chemistry, and I shall therefore not be assuming a position that will be denied to me if I claim to discuss the question from the point of view of a man of science, rather than of a manufacturer seeking to increase the scope of his output.

Let me then state that from the outset the exploitation of saccharin has been approached in this spirit. Before it was placed upon the market, specimens representing the average products of manufacture were submitted to some of the most eminent of physiologists with a view to determining whether or not it was toxic. After due investigation, certificates asserting it to be absolutely non-toxic were received from Drs. Stutzer, Salkowsky, Stadelmann, Aducco, Mosso, and others. The reports of these eminent physiologists encouraged and warranted an extended trial of the substance in some of the principal hospitals of this and other countries. They fully confirmed the anticipations of the authorities above mentioned, and enabled Dr. Leyden, the consulting physician to the Charité Hospital in Berlin, to give an official certificate based upon six months' personal experience in the administration of saccharin in varying doses, affirming its harmlessness by stating that "*no anxiety as to its effect upon health need attend its use*," and that saccharin "*may be consumed over prolonged periods.*"

The views thus expressed by the most distinguished of our physicians has been confirmed by eminent medical men in all countries—among others, I rejoice to find, by Dr. Pavy, to whom I cannot sufficiently express my indebtedness for his manly and outspoken utterances. I hesitate to impute motive, but it is certainly a curious fact that saccharin should have been freely administered to the afflicted in all parts of the world for more than a year without one word being uttered as to its harmful effects upon the system; and it is still more curious that the first attacks upon it should have been coincident with its exploitation in France as a competing product with sugar in the flavouring of wines, spirits, and liqueurs. This fact has been severely commented on by a leading French journal (*Courrier de Lyons*, Aug. 28th, 1888), the article upon the subject being headed by the suggestive title "Hygiene and Sugar Refining." I should be the last to desire to implicate the medical men of France who have written and spoken about saccharin in the unworthy manœuvres of the French sugar refiners, but as a man of science, I must take exception to the action of Dr. Dujardin-Beaumetz in the matter. I do not for one moment question his *bona fides*, but I do with confidence submit that his statements as to the value of saccharin are so conflicting as to deprive them of any value whatever in the eyes of impartial scientific men. This gentleman was the reporter of the Commission appointed by the Conseil d'Hygiène et de Salubrité de la Seine to ascertain whether saccharin was injurious to the public health, and in that capacity, after consultation with his colleagues, he declared it to be dangerous to the public health. Yet only a short time previously he had employed the following words at a meeting of the Therapeutical Society held on March 20th

last: "As I am speaking of diabetics, I do not know how too forcibly to recommend to you the employment of saccharin, which permits of the use of dishes of a most agreeable taste, quite equal to those in which sugar has been employed." Indeed, Sirs, your own Paris correspondent, in your issue of June 16th, further reports him as saying that "he could confirm the marked advantages of saccharin as a substitute for sugar in the alimentation of diabetics. It is much appreciated by patients, who find that it has a savour identical with that of sugar without any of the inconveniences. *Although it does not appear to have any noxious action*, it cannot be employed like sugar as an aliment, because it passes through the economy, and is eliminated by the urine without being assimilated or transformed."

Does it not, Sirs, also occur to your readers that we ought to have some definite assurance as to the composition of the saccharin upon which the Commission and Dr. Worms have based their report? Is not this the more necessary in view of the fact that the saccharin tablets sold by M. Garnier, the well-known chemist of Paris, under the name of "Sucre Edulcor," and officially certified by the above-mentioned Conseil d'Hygiène et de Salubrité de la Seine as being harmless for diabetics, actually contain a considerable quantity of beetroot sugar in addition to saccharin? What is the inference to be drawn from such facts and such experiments? It is better that I should leave the expression of opinion to your readers, and this I do with every confidence in their impartiality and sense of fair play.

The attacks upon saccharin have sorely disquieted the public mind. If they are merited, the anxiety is justified. If not, it will unfairly prejudice my discovery, which, after all, will confer as much benefit upon humanity as upon myself. In this spirit I ask your readers no longer to observe that silence which in most cases, but not in this, is both dignified and necessary. It is no question of advertisement. I have been grievously attacked, and I plead for justice.—I am, Sirs, your obedient servant,

DR. CONST. FAHLBERG.

Salbke-Westerhüsen a. E., Nov. 12th, 1888.

THE CAUSE OF CRAMP.

To the Editors of THE LANCET.

SIRS,—I have read with interest, in your issue of Nov. 10th, the article on "Common Cramp and Allied Affections," by Mr. Samuel D. Hine. I am somewhat surprised that in enumerating or suggesting the causes of this affection (the chief of which is stated to be pressure) Mr. Hine overlooks that which his paper affords teeming evidence of—viz., the action of toxic alkaloids or ptomaines. The demonstrations by Selmi and Gautier that certain cadaveric alkaloids caused the condition called "botulism" by the Germans, opened up a new and highly important field in pathology. Several ptomaines have been found by Mosso to act on muscle in a manner similar to lead, causing unequal contractions, and consequently cramp. Many of the ptomaines have muscarine-like properties, such as that discovered by Brieger in putrefying fish. Muscarine is antagonistic to atropine or belladonna, which is an ingredient of Mr. Hine's prescription. It is probable that those who are the habitual subjects of cramp have a certain deficiency of the liver, one of whose functions it is to destroy these toxic alkaloids. I am, Sirs, yours truly,

Glasgow, Nov. 12th, 1888. A. G. AULD.

LIVERPOOL.

(From our own Correspondent.)

HOSPITAL SUNDAY AND SATURDAY.

THE annual meeting of the supporters of the Hospital Sunday and Saturday movement was held on the 6th inst., under the presidency of Mr. Oakshott, the retiring mayor. The returns both of the Sunday church and chapel collections and of the Saturday boxes showed an increase over those of last year, the former to the extent of £426, the latter of £36. Since the first Hospital Sunday here in 1871 the sum realised both for the Sunday and Saturday funds has reached a grand total of £169,423. That the decrease of late years has been due rather to depression of trade and other causes than to any loss of sympathy with the medical charities is shown by the circumstance that the decrease has been checked and that an increase has begun. The expenses amount to less than 3 per cent., thus enabling the treasurer to hand over the balance, upwards of 97 per cent., to the hospitals and dispensaries. These facts and figures are matters of congratulation to those who inaugurated the movement here eighteen years ago, and ought to encourage those who are trying to establish Hospital Sunday where it is still unknown.

WORKING MEN AND THE HOSPITALS.

One of the speakers at the meeting observed that Hospital Saturday revealed a mine of wealth which had only been tapped, and the truth of this is shown by a very simple calculation. If 50,000 working men contributed each one penny a week, this would amount to £10,833 6*s.* 8*d.* annually, a sum which admits of considerable expansion; whereas the boxes for the whole year have only realised £2048, and the Hospital Saturday Fund has never exceeded £3000 in Liverpool. In Birmingham and Glasgow as much as £5000 have been raised by the working men for the hospitals in one given year, and yet this large sum only represents a proportion of what might be done by the working men in those localities, in Liverpool, and in London.

MUNIFICENT DONATION TO UNIVERSITY COLLEGE.

Mr. Henry Tate has given £16,000 for the completion of the College buildings. This gentleman was a donor of £5000 when the University was originally founded, the result of a dream of the future described by the present Bishop of Durham, when on a visit here some years ago. Dr. Lightfoot was educated at the Royal Institution, and knew well what princely sums the citizens of Liverpool can and will give when the spirit moves them. This last gift of Mr. Tate is a great encouragement to the Council of the College, and an example to other citizens who have acquired wealth.

RETIREMENT OF DR. ROGERS OF RAINHILL.

Dr. Thomas Lawes Rogers, the well-known and highly esteemed resident medical superintendent of the County Asylum, Rainhill, has recently announced his intention of retiring from the office he has held for a period of thirty years. Dr. Rogers' connexion with this asylum (which receives all the pauper lunatics from Liverpool) commenced in 1853, when he went there as assistant to Mr. Cleaton, now commissioner in lunacy. After a year and a half he left to join the Coldstream Guards as assistant surgeon, serving three years and a half with that corps (including one year in the Crimea), and returned to Rainhill Asylum as medical superintendent in April, 1858. At that time the asylum held 400 patients; there is now accommodation for 1800. As may be judged, with such a number the work has of late been exceptionally heavy, and Dr. Rogers has had two illnesses, one in 1879 which compelled him to go abroad for four months, and another in 1881 which involved absence from duty for a similar period. To enumerate the improvements which have been made in the structure of the asylum and in the treatment of the patients during these thirty years would be equivalent to giving a history of the institution during the same period. One noteworthy fact may, however, be mentioned. During this extended period there has been no epidemic, and zymotic disease has been almost unknown, with the exception of four or five cases of scarlatina among the female attendants last year. This is due, no doubt, in great measure to the attention which has been given to the sewage. This has been entirely changed, nearly all the sewers being now taken directly out of the building, instead of being carried through the interior, as was originally the case. More than all these is the high tone which has prevailed all these years throughout the vast establishment, owing to Dr. Rogers' good influence; and those who have the management of similar institutions will fully appreciate the meaning of this.

THE POLICE COURTS AND FOUL AIR.

For many years past complaints have been made of the foul air in the police and coroner's courts, especially the first police court, in which Mr. Raffles, the stipendiary magistrate, presides. Dr. Commins, a local barrister, has promised to bring the matter before the Health Committee, of which he is a member, and it is to be hoped that an improvement will be effected. There is no lack of fresh air, but what is required is greater facility for the escape of foul air, a defect of most public buildings. Architects and builders have yet

to learn, apparently, that foul air can only escape from above—that it will ascend, not descend.

TWO FATAL CASES FROM PISTOLS LEFT LOADED.

The many warnings which have been held out to persons not to leave firearms loaded have again proved futile. Within the last few days a girl has been shot dead by her brother pointing playfully at her a pistol which was believed to be unloaded. In the second case, a gentleman who had for years been of unsound mind, but had not shown any suicidal tendency, was left alone by his attendant. He managed to possess himself of a loaded pistol, which his son had placed at the bottom of a box full of cricket materials, had concealed it, and shot himself when left alone.

Liverpool, Nov. 13th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

DURHAM.

I regret to notice the death of Mr. R. N. Robson, of the city of Durham, which took place at the North Bailey, his residence, on Thursday last. Mr. Robson was an M.R.C.S. and L.S.A., and studied at Guy's and St. Thomas's nearly fifty years ago. He was surgeon for some time to the Durham County Hospital, and was much respected by the public and the profession.

DEATHS FROM BURNS IN THE NORTH OF ENGLAND.

There is a terrible catalogue of deaths from fire in the north last week. First we had four young children of one family burnt to death in a cottage at Helmsley, near Malton, on Wednesday. The children were left alone, and the cottage took fire with fatal result. It is stated that a paraffin lamp was left burning, to which it is more than probable the fire is to be attributed. Then on Friday a poor little Italian boy, aged four years and a half, was admitted into the Newcastle Infirmary and died from the effects of burns the same night. The child had been left with other children by the parents, who were organ people, when by some means its clothes took fire, by which it sustained fatal injuries. Again, on Thursday, at Sunderland, an inquest was held on a little girl, aged three years and a half, whose clothes took fire when playing in a washhouse, causing her death from nervous shock and convulsions.

NORTH SHIELDS AND TYNEMOUTH.

The annual meeting of the Tynemouth Infirmary, which is for the borough, including North Shields, shows that the institution is in a satisfactory financial condition. The amount of the contract for the new building was £3000, and the committee require less than £400 to make up this sum.

Newcastle-on-Tyne, Nov. 14th.

EDINBURGH.

(From our own Correspondent.)

CADELLS *v.* BALFOUR AND OTHERS.

NOT to be outdone by male students in matters either medical or legal, a pretty little quarrel with the executive committee of the Edinburgh School of Medicine for Women has been picked by two of the girl undergraduates who formally studied in that school. It seems that, after studying for two years, Miss Grace Ross Cadell and Miss Martha Georgina Cadell received a letter from the lady secretary informing them that the executive committee were unable to readmit them to the school in October. No reasons for this high-handed action were given, even after repeated application. It appears that the sole offence was staying in the wards of the Leith Hospital after the regulation hour of attendance, and then not submitting to the authorities sufficiently in the matter of apologies, the lady superintendent not deeming the explanation of one of the ladies concerned sufficiently comprehensive. Notwithstanding a probation period and frequent warnings, it is stated that the Misses Cadell showed a spirit of discontent, and that the defenders were reluctantly compelled to come to the conclusion that if the good discipline and order of the school were to be maintained the pursuers must cease attendance at the school. It is rumoured that one of the pursuers appeared at one of the opening lectures in one of the class rooms this session, but that the vigilant eye and authoritative manner of one of the ladies of the executive committee soon set that matter straight. It is a pity that lady superintendents should not be able to conduct ward work as amicably with the gentler as they can with the sterner sex. The pursuers claim £500 each as damages, or re-admission to the school.

THE EDINBURGH HEALTH LECTURES.

In opening the ninth series of lectures for the people in connexion with the Edinburgh Health Society, Dr. R. W. Felkin took as his subject "Popular Errors in regard to Medicine." Dealing with the question historically, he made use of much of his vast store of knowledge of African superstition and witchcraft. He then referred to quacks and patent medicines in terms none of the mildest, and treated amongst other subjects on dipsomania, demoniacal possession, and infirmaries and their slanderers. It was a mistake, he said, on the part of well-to-do people to suppose that infirmaries were established for their benefit, though they were the people who most appreciated the benefits of hospital treatment. Some poor people were most averse to letting their children enter the infirmary, but he was convinced that the happiest days of many a child's life were spent within the walls of a hospital. Speaking of women's work, he said that he objected to the notion that all barriers were to be broken down between the sexes, and, with regard to the modern education of girls, he thought it was almost time to advocate the formation of a "Prevention of Cruelty to Girls Association."

Edinburgh, Nov. 14th.

DUBLIN.

(From our own Correspondent.)

AMALGAMATION OF THE MEDICAL SCHOOLS.

A MEETING of medical students was held on Monday evening in the Concert Room, Rotunda, to protest against the proposed scheme of amalgamation. The Chairman, after some introductory remarks, said that if the necessity arose they would not memorialise the College of Surgeons—it would be waste of time,—but they would approach his Excellency the Lord-Lieutenant, in whom was vested the power of sanctioning or quashing the scheme. The following resolutions were adopted:—"That this meeting protests against the proposed amalgamation scheme as not conducive to the interests of medical students in general. That this meeting is of opinion that the future prospects of night students are in imminent danger of being abolished at no distant date under the proposed new scheme, and that for that reason alone they have met to demand the recognition of those rights through the continuance of the present system of medical education. That a memorial be signed by all medical students and forwarded to his Excellency the Lord-Lieutenant, requesting him to give due consideration to the claims of the students before granting his acquiescence to the said scheme. That a Students' Defence Association be formed, the object of which shall be to watch over and protect the interests of medical students."

It is believed that an injunction will be sought for this week to restrain the Carmichael School from joining the proposed scheme of amalgamation between the Carmichael, Ledwich, and School of the Royal College of Surgeons.

TYPHOID FEVER.

Statements have been made that an outbreak of typhoid fever has recently prevailed among the *employés* at the head office of the Bank of Ireland in College-green, and that numerous deaths had occurred. I have made inquiries, and learn that during the past three months only one person connected with the bank has had typhoid, and that no death has occurred during that period. If we go back to the past three years, about ten cases of typhoid fever among the clerks and servants of the bank took place, but whether these were due to the insufficient sewerage is a debatable question. Probably the greater number may have been due to bad sewerage, but I have been informed that the objectionable sewers have been rectified, and that at present no complaint can be made in this respect.

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The cases of typhoid fever in hospital on the 3rd inst. numbered fifty-four, but, although the number of cases of this disease has of late been more numerous in Dublin than usual, there has been nothing like an epidemic. Sir Charles Cameron, medical officer of health, states that it is remarkable that, while other zymotic diseases have declined in Dublin, typhoid fever has not decreased; but he also points out that there is still much to be accomplished in reference to the proper disposal of the sewage of the houses of Dublin, and that many cases of typhoid fever may easily be traced to defective house drains.

UNIVERSITY OF DUBLIN BIOLOGICAL ASSOCIATION.

The annual opening meeting of this society was held last week in the Museum Buildings, Trinity College. The presidential address was delivered by Mr. Bewley, who chose for his subject, "The Struggle between Cells and Bacteria."

The salary of Dr. Donovan, medical officer of health for the city of Cork, has been increased from £160 to £200.

Dublin, Nov. 13th.

PARIS.

(From our own Correspondent.)

A NEW MICROBE.

PROFESSOR VERNEUIL has communicated a second note from Dr. Charles Richet on the new microbe which he found in an epithelial tumour of a dog, which was reported in THE LANCET of last week. A culture of the "staphylococcus septicus" inoculated in a dog rendered it only slightly ill, but injected in the peritoneum of a rabbit it caused a grave malady, and frequently death. If into a rabbit be injected the blood of a dog rendered ill by the inoculation of the microbe, the rabbit escapes death by a subsequent inoculation. This blood seems to play the *rôle* of a vaccine. If the blood of a dog in health be injected into a rabbit, the symptoms induced in the latter, when afterwards inoculated, are not fatal. Professor Verneuil sees in these experiments intimations of a new influence of the blood of one animal on another, as regards the effect of cultures in preventive vaccination, and he remarks that they give rise to a new idea.

ACTION OF HYDROFLUORIC ACID ON THE BACILLUS OF TUBERCULOSIS.

Dr. Hérard has undertaken to respond to Professor Jaccoud's note on the action of hydrofluoric acid on the bacillus of tuberculosis, also reported in THE LANCET of last week. Dr. Hérard says he does not accept as demonstrated that hydrofluoric acid is without action on the bacillus of Koch. On the contrary, he believes in this action in certain determined conditions, and supports his opinion by reference to the researches of Dr. Trudeau of New York. This physician has shown that tuberculous cultures, submitted to the action of solutions of hydrofluoric acid sufficiently concentrated, may be inoculated without producing tuberculosis. Moreover, from a practical point of view, the hydrofluoric inhalations may have their utility, even if they do not destroy the pathogenic bacillus in the parenchyma of the lungs. It is possible that they act on the phenomena of putrefaction; they may also modify nutrition in an advantageous manner, and thus put phthisical subjects in a position favourable for ultimate cure. Numerous observations prove that patients have found great benefit from hydrofluoric inhalations. Their use may, therefore, be preserved in practice, as cod-liver oil is in the same affection, as well as arsenic, creasote, or tannic acid, which, though often very useful, are not invariably attended with success.

EFFECTS OF THE INJECTION OF SOLUTIONS OF SALT.

MM. Dastre and Loye, in a note in the *Archives de Physiologie*, state that a considerable quantity of a physiological solution of salt may be injected successively into the veins of an animal without causing any apparent trouble, immediate or consecutive. This quantity has been raised by the experimenters beyond two-thirds of the weight of the animal. The expression "toxic dose," the authors remark, has no meaning so far as the salt solution is concerned. There is no such thing as a toxic dose, but there is a toxic rapidity. This rapidity is superior to 3°; that is to say, the quantity of the solution introduced does not exceed three cubic centimetres per minute and per kilogramme of the animal. In order for the injection to be innocuous certain conditions are necessary—as moderate rapidity of the injection and the amount introduced, and a healthy state of the organs, especially of the kidney. When these conditions are not fulfilled the animal succumbs sooner or later. There is then observed a constant exudation which is produced in the serous cavities; also sanguineous suffusions and exudations by the mucous membranes. When the course of the urinary elimination is observed, one notices, as a general rule, a perfect parallelism between this excretion, on the one hand, and the injection on the other. After a certain time, the quantity injected is balanced by the quantity which is eliminated. This normal regimen reveals the existence of a mechanism which regulates the quantity of water of the organism. This mechanism begins to act when the quantity of salt water injected is equal to the quantity of the blood of the animal before the experiment. The surplus is immediately rejected. This quantity, equal to the weight of the blood of the animal, seems to separate in two portions: one portion (about 25 per cent. of the weight of the blood) remains in the circulatory apparatus during the whole time of the experiment, and is only eliminated definitely later on; a second portion (about 75 per cent.) is retained momentarily in the serous membranes and the tissues, to escape equally later on. These facts show a physiological connexion between the circulatory and serous systems connected with the preservation of the balance of the watery portion of the blood and of the tissues. Analyses have shown that, when the animal returns to the normal condition, the injection of physiological salt water produced nothing but a "lavage," properly speaking, or a washing of the blood and of the tissues.

Paris, Nov. 13th.

VIENNA.

(From our own Correspondent.)

AMERICAN AND ENGLISH STUDENTS IN VIENNA.

THE number of American and English students attending the lectures and courses in Vienna is increasing year by year. Now, in the first days of the winter session, more than seventy students have entered, the most of them being Americans; England is represented by only a few Glasgow, Edinburgh, and Aberdeen men. The courses delivered by the *privat-docenten*, especially those on skin diseases, syphilis, laryngology, gynæcology, and operative surgery, attract most, on account of the abundance of interesting cases and dissections. Since the beginning of this session, useful information concerning academical matters is given to the foreign students by a special Medical Students' column, contained in the only English Vienna paper—the *Vienna Weekly News*,—wherein the new courses, the fees, &c., are announced every week. Some of the courses are given in English.

THE LATE PROFESSOR VON BAMBERGER.

The disease from which Professor Bamberger had been suffering for some months and to which he finally succumbed on Nov. 9th, at 9.30 A.M., is believed to have been cancer of the bronchial glands, and hæmoptysis occurred by corrosion of the bronchial vessels by cancerous ulcerations. No post-mortem examination was made.

Vienna.

MEDICAL MAYORS.—The following is a list of the members of the medical profession who have been selected to serve as mayors for the current year in the various towns of England and Wales:—W. Nettle, M.R.C.S., L.S.A. (re-elected), Liskeard; James Blake Maurice, M.D., F.R.C.S. Eng., J.P., Marlborough; H. W. Freeman, F.R.C.S.I., Bath; John Dommett Bishop, M.R.C.S. (fourth time), Calne; Hugh Moss, M.D., M.R.C.S., Congleton; John Sherburn, M.B., C.M. Ed., Hull; F. E. Manby, F.R.C.S. Eng., Wolverhampton; W. Clarkson, L.R.C.P. Ed., L.F.P.S. Glas., Morpeth; C. A. Colmer, L.F.P.S. Glas. (re-elected), Yeovil; Alderman J. B. Stedman, F.R.C.S. Eng. (re-elected), Godalming; and Alderman R. R. Daglish, M.R.C.S., L.S.A. (re-elected), New Romney.

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Obituary.

JOSEPH EARLE, M.R.C.S., L.S.A., L.M.

THE funeral of the late Mr. Earle, who died at The Priory, Brentwood, Essex, on Oct. 4th, was the occasion of one of the most remarkable demonstrations of respect and grief that have been witnessed in the whole county of Essex for many years, literally thousands of mourners, of a most representative character, from nobleman to peasant, attending to prove how the deceased gentleman had won his way to the hearts of all classes.

Mr. Earle came of an old north country family, and was the third son of the late Rev. John Earle, of Walton Abbey, Yorkshire. He was born at Great Driffield in that county, and was sixty-nine years of age at the time of his death. He was educated at St. George's Hospital, and became a distinguished student there, holding most of the resident appointments and being leading prizeman and medalist of his year. Thirty-six years ago he settled in Brentwood, taking over in succession the practices of Drs. Marsh, Branfoot, and Growse, and for the last twenty years he had been in partnership with Mr. J. C. Quennell. Mr. Earle died "in harness," so to speak. In his usual robust health till the commencement of his fatal illness, on the Friday previously to his death he conducted a post-mortem examination on the body of a young woman who had died of pyæmia, and the following Monday he was attacked with symptoms of blood poisoning. All his great strength seemed to leave him at once. Dr. Goodhart of London and Dr. Branfoot of Brighton saw him; but, in spite of their attentions and those of his partner and many medical brethren, he succumbed to the disease early on Thursday morning.

A strikingly handsome man, peculiarly generous hearted, with the most genial of manners, his address carrying much old-fashioned courtesy with it, the honest kindness of his nature was evident in all he said or did; whenever Mr. Earle made a patient he made a friend. He worked up a very large and high-class practice, and throughout Essex was respected and admired by his medical *confrères* and his patients for his practical ability and his ever-ready sympathy for those in distress. He never spared his own labours when he could be of the slightest comfort to those afflicted. In his younger days a bold and fearless rider, "in the first flight across country," as a judge of a horse he had few equals, a first-rate shot, a well-known prize-winner at the poultry shows and elsewhere, he was ever an ardent and enthusiastic sportsman, and never spared his purse to encourage local cricket, football, or athletics.

Mr. Earle was indeed the very type of the English gentleman, and of the highest class country practitioner, and his loss is a severe personal grief to high and low. His earnest, unselfish work, his urbanity, his kindliness of heart, and his wide-spreading benevolence will ever reflect the highest esteem and affectionate regard on his memory and on the noble profession he esteemed it high honour to belong to.

> Something attempted, something done,
> Has earned a night's repose

JOHN LEIGH, M.R.C.S.

THE death is announced, after a long illness, of Mr. John Leigh, on Sunday last, at his residence near Bowden. He was for twenty years the medical officer of health for Manchester. His medical studies were pursued first at Ashbourne, where he received some training from a local practitioner, afterwards at Manchester, and were completed at Guy's Hospital, London. Before attaining twenty-one years of age he filled two chairs (Chemistry and Forensic Medicine) in the then Manchester Schools of Anatomy and of Medicine, and upon obtaining his diploma began practice in that city, which he successfully conducted until his appointment in 1868 as medical officer of health. As medical adviser to the corporation, he leaves an enduring memorial in a record of the improvements effected (several of which were due to his initiation) in the sanitary condition of the city during his tenure of office, particularly in regard to the wonderful system of sewage disposal, the success of which has been specially due to Mr. Leigh's efforts.

REGINALD HARE COMBES, M.R.C.S., L.R.C.P.

WE regret to have to announce the death, on the 7th inst., from sarcoma, of Mr. R. H. Combes, of Sydney Infirmary and St. Bartholomew's Hospital. Born, in 1860, in the wilds of Australia, he was sent over at fourteen to England to be educated at Bedford Grammar School, and, after a visit of from two to three years' duration to his colonial home, returned to this country to study medicine at St. Bartholomew's. There he earned considerable reputation for his marvellous versatility, and especially for his great mechanical skill, the lecturer on anatomy gladly availing himself of his services as prosector. After taking his degrees he was appointed registrar, and subsequently house surgeon, at the North-west London Hospital. In January, 1887, he entered into partnership with Mr. W. H. Holman, of Adelaide-road, Hampstead. His contributions to medical literature consisted of a description, published in THE LANCET, of "A New Stethoscope," an invention of his which met with the profession's very substantial approval, and of a paper on the Transposition of the Aortic Arch, which appeared in the St. Bartholomew's Hospital annual reports. A few days before his death he had been elected for the second year honorary secretary to St. Luke's Guild, of which excellent institution he had for some years been an enthusiastic supporter.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following candidates passed the First Professional Examination for the diploma of Fellow at a meeting of the Board of Examiners on the 12th inst.:—

J. M. Harding Martin, of Edinburgh and Liverpool; W. T. Freeman, of St. Bartholomew's Hospital; Robert Caldwell, of Westminster Hospital; Wilfred Martin Barclay, of Bristol; and J. Edwards, of Leeds and Dublin. (Eleven candidates were referred.)

Passed on the 13th inst.:—

C. S. Spong and Fdk. François Burghard, of Guy's Hospital; M. L. Jones, W. M'Adam Eccles, W. A. Clark, and J. H. Edwards, of St. Bartholomew's Hospital; D. Stillwell Gunn and C. D. Marshall, of University College Hospital; Allan J. M'Nab, of King's College Hospital; J. R. Earle, of Oxford and St. Bartholomew's Hospital. (Six candidates were referred.)

Passed on the 14th inst.:—

W. W. Kennedy, of Glasgow and St. Bartholomew's Hospital; Ed. P. S. Gane, of Leeds and St. Bartholomew's Hospital; H. Stephen Sandifer, of King's College Hospital; M. E. Paul, of London Hospital; J. H. Nicol, of Glasgow and London; George C. Rennie, of Melbourne University; C. Gibbs, of Charing-cross Hospital; H. E. Tracey, of St. Bartholomew's Hospital; Horace George Turney, of St. Thomas's Hospital. (Eleven candidates were referred.)

The following are the arrangements for the Final Examination for the diploma of Fellow, for which thirty-seven candidates have entered their names—viz.: Tuesday, 20th inst., Written Examination, 1.30 to 5.30 P.M.; Wednesday, 21st inst., Clinical Examination, 2.15 to about 5.45 P.M.; Thursday, 22nd inst., Operations and Surgical Anatomy, 1.30 to about 7.45 P.M., at the Examination Hall; Friday, 23rd inst., *Vivâ-voce* Examination (Pathology), 5 to 9 P.M., at the Royal College of Surgeons. Candidates will be required to attend on each of the above-mentioned days.

VICTORIA UNIVERSITY.—On the 1st inst. the following degrees were conferred on the undermentioned candidates:—

Doctor of Medicine.—John Hilton Thompson, M.B., Owens College.
Bachelor of Medicine and of Surgery.—First Division; John Hampden Barker (Owens College), and Robert James M'Lean Buchanan (University College), specially distinguished in Systematic and Clinical Medicine; Arthur E. Giles and J. Mountfort Johnson, of Owens College. Second Division: John Brown, Ernest Courtney Lomas, H. Waytes Pomfret, of Owens College.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At meetings of the Court of Examiners held on the 8th and 9th inst. the following were admitted Fellows:—

William Michael Courtney and William Owen, of the Indian Medical Department.

ROYAL UNIVERSITY OF IRELAND.—The following Exhibitions have been awarded:—

First Examination in Medicine.—First Class (£20): Alex. Blaney. Second Class (£10): Patrick O'Brien.
Second Examination in Medicine.—Second Class (£15): Andrew Fullerton.

Third Examination in Medicine.—Second Class (£20 each): John Hennessy and J. Macnamara.
Degree Examination (M.B., B.Ch., B.A.O.)—Second Class (£25 each): G. W. Jenney and Denis J. Coffey.

CAMBRIDGE UNIVERSITY.—The Syndicate for the management of the examination in State Medicine in their fourteenth annual report state that thirty-six candidates presented themselves for examination in October last, including four in Part I. only. Twenty-four passed in both parts, three in Part I. only, and two in Part II. only. The number of candidates was larger than at any previous examination, and the proportion of failures not nearly so great as it was last year. Mr. Francis Darwin, M.A., M.B., of Trinity College, has been appointed Reader in Botany, in succession to Dr. Vines. Mr. Edward Henry Douty, M.A., M.R.C.S., L.R.C.P., of King's College, has been appointed Senior Demonstrator in Anatomy. Mr. William Stanley Melsome, B.A., Fellow of Queen's College, and Mr. Robert William Michell, B.A., of Gonville and Caius College, have been appointed Junior Demonstrators of Anatomy.

THE thirteenth annual meeting of the committee of the Tynemouth Infirmary was held on the 6th inst., when satisfactory, financial, medical, and general reports were presented and adopted.

THE seventy-fourth anniversary sermon on behalf of the Derby and Derbyshire General Infirmary, was preached on the 8th inst. at All Saints' Church, Derby, by the Very Rev. the Dean of Lichfield (Dr. Bickersteth). The collection realised £131.

FOOTBALL ACCIDENT.—Whilst playing, last week, in an Association football match, at Maidenhead, between Norfolk Park School and Tollington House School, a boy named Eddie Brown accidentally fell over one of his opponents' legs and sustained a broken arm.

OPENING OF THE SEWAGE DISPOSAL WORKS AT KINGSTON.—Last week the Sewage Disposal Works at Kingston were publicly opened by the mayor of the borough in the presence of a large and influential company. The A B C process has been adopted.

BEQUESTS AND DONATIONS TO HOSPITALS.—Mr. George William Petter, late of Bournemouth, has bequeathed £20 each to the North Devon Infirmary and the North Devon Dispensary at Barnstaple, and the Home for Incurables at Putney.—A donation of £1000 has just been given by Mr. John Sharp of Balmuir for the endowment fund of the Dundee Convalescent Home, Barnhill.

PRESENTATIONS.—Dr. Valentine, of Earlestown, has just been presented by the members of the Earlestown Ambulance Corps, for his valuable instructions to them in ambulance work, with a splendid binocular microscope, with lenses and other appurtenances complete, enclosed in a handsome box, upon which an appropriate inscription is engraved.—The staff of the Borough Hospital, Sheffield, have just presented Dr. C. H. Willey, on the occasion of his leaving that institution, with a handsome case of cutlery.

THE PASTEUR INSTITUTE.—The opening on the 14th inst. of the institute, built by public subscription for M. Pasteur, just off the Boulevard de Vaugirard, was attended with considerable ceremony. The President of the Republic presided, and the proceedings opened with a brief speech from M. Bertrand, the Secretary of the Academy of Sciences, eulogistic of M. Pasteur and his manifold researches in the domain of science. Dr. Grancher, who has been M. Pasteur's chief lieutenant for the last three or four years, then reviewed the work done in inoculation since 1885, and informed his hearers that there were about twenty laboratories for inoculation, of which seven were in Russia, five in Italy, and one each in Roumania, Austria, Brazil, Cuba, and the Argentine Republic, while two more will shortly be opened at Chicago and Malta, the last-named, it may be observed, being the only one on British soil. M. Christophle, Governor of the Crédit Foncier and treasurer of the fund, then stated that the subscriptions amounted to over £100,000, of which £40,000 remained as capital for an endowment fund. The son of M. Pasteur, who is attached to the French Embassy at Rome, then read a brief review of the work done by his illustrious father, and at the conclusion of the ceremony the visitors were conducted through the building.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—A quarterly meeting of this Association was held in the hall of the Royal College of Physicians, Edinburgh, on the 8th inst. The President (Dr. Clouston) occupied the chair, and there was a good attendance of members. Four new members were elected, and the secretary for Scotland was instructed to express the sympathy of the meeting with Dr. Rayner, the general secretary, in his retirement from the post he had so long occupied. Arrangements were made for the next examinations for the certificate in Psychological Medicine in Edinburgh, Glasgow, and Aberdeen on Dec. 17th, 19th, and 21st respectively. Dr. Robertson read for Dr. McPherson a paper on a case of Raynaud's Disease with Acute Mania. Dr. Yellowlees introduced a discussion on Restraint in the Treatment of the Insane, which was joined in by most of those present.

ST. THOMAS'S HOSPITAL: PRESENTATION OF A TESTIMONIAL TO DR. ORD.—On Saturday, Nov. 10th, Dr. Ord was entertained at dinner by the members of the staff of St. Thomas's Hospital, and presented with a testimonial in recognition of his services as Dean of the Medical School for a period of twelve years. Dr. Bristowe, who occupied the chair, made the presentation on behalf of his colleagues, and expressed the indebtedness which they felt to Dr. Ord for his services during the time that he had been Dean; he referred to his own long friendship with Dr. Ord, and to the success attained by the school during the last twelve years—a success mainly due to Dr. Ord's untiring devotion to the duties of the deanship, and to his great business capacity and tact. At the close of the speech the testimonial—which consisted of a silver candelabrum, silver salver, and a fan for Mrs. Ord—was presented. Dr. Ord, in reply, thanked his colleagues for their gift, and ascribed the success of the school not to his own efforts only, but to the excellent teaching done in the various departments both of school and hospital. During this second period of tenure of the office (for he had been Dean in 1855 and 1856) the number of students had increased from about 40 to nearly 130, and the capacity of the medical school as a teaching centre had greatly increased. Important questions would present themselves for consideration by his colleagues in the future as to the establishment of a residential college and the formation of a course of post-graduate lectures.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

FIRST EXAMINATION.

PART 1.—CHEMISTRY, INCLUDING CHEMICAL PHYSICS.

Tuesday, October 2nd, 1888, from 2 to 5 P.M.

Candidates must answer at least four questions and not more than six. At least one question in each section must be answered. Candidates unable to answer four questions must report the fact to the presiding examiner, and are not allowed to proceed with their examination.

Section 1.—1. Describe a hydrometer. Explain its use, and the principles of its action. 2. What is meant by heat of combustion? How is it determined, and how expressed?

Section 2.—3. Strong sulphuric acid is heated with the following bodies: copper, nitrate of sodium, oxalic acid, chloride of sodium, charcoal. Explain and give the formulæ for the changes, if any, which occur. 4. How would you prepare the carbonate and oxide of magnesium from the sulphate? Describe the properties of these bodies and state in what respects they differ from the corresponding calcium compounds. 5. How is pure iodide of potassium prepared? What are its properties? Calculate the weight of iodine contained in ten pounds of this salt. (K=39; I=127.)

Section 3.—6. Give the formula of urea and the percentage amount of nitrogen which it contains. What takes place when an alkaline solution of hypobromite of sodium is added to a solution of urea, and how may the method be employed in estimating the amount of urea in the urine? 7. In what respects do the vegetable alkaloids bear a resemblance to ammonia? How can quinine be extracted from cinchona bark, and morphia from opium? 8. How can you obtain (*a*) ethylene (olefiant gas) and (*b*) ether by the action of sulphuric acid on alcohol? Give the formula and properties of each of these bodies.

Note.—This paper also applies to candidates for the licence of the Royal College of Physicians of London.

PART 2.—MATERIA MEDICA AND PHARMACY.

Wednesday, October 3rd, 1888, from 2 to 5 P.M.

Candidates must answer at least four questions. Candidates unable to answer four questions must report the fact to the presiding examiner, and are not allowed to proceed with their examination.

1. What is an anæsthetic? Distinguish between local and general anæsthetics, and give examples of each. By what methods and in what forms are these agents employed? 2. Describe the physical properties

of permanganate of potassium. State the strength of its official solution, and give an account of its actions. 3. Enumerate and classify the purgatives with which you are acquainted, and state in what form and dose you would administer calomel, sulphur, colocynth, senna, and jalap. 4. In what forms and in what doses is sulphate of iron employed medicinally? Describe its action when administered internally. 5. What is an emulsion, and how does it differ from a solution? Give examples of drugs which may be administered in the form of an emulsion, with the method of preparation required in each case. 6. Give an account of the origin of opium, and enumerate its more important active principles. Give the composition and strength of the official compound powders containing opium.

Note.—This paper also applies to candidates for the licence of the Royal College of Physicians of London.

PART 3.—ELEMENTARY PHYSIOLOGY.

Tuesday, October 2nd, 1888, from 10 to 12 noon.

Candidates must answer at least four of the six questions. Candidates unable to answer four questions must report the fact to the presiding examiner.

1. *Viva voce* on microscopical sections. 2. What do you understand by the terms (1) crassamentum, (2) buffy coat, (3) liquor sanguinis, (4) serum of blood? 3. Describe the mechanism of quiet and forced inspiration. 4. Contrast the phenomena of contraction in voluntary and in involuntary muscle fibres. 5. Mention the chief constituents of bread, and describe how each of them is acted upon by the various digestive juices. 6. Explain the effects of stimulating (*a*) a motor nerve, (*b*) a sensory nerve, (*c*) a nerve of special sense.

SECOND EXAMINATION.

PHYSIOLOGY.

Thursday, October 4th, 1888, from 2 to 5 P.M.

Candidates must answer at least four questions. Candidates unable to answer four questions must report the fact to the presiding examiner, and are not allowed to proceed with their examination.

1. What is understood by the expression "blood pressure"? Explain the conditions which lead to variations in the normal blood pressure in arteries and veins. 2. Describe the changes which the proteid constituents of food undergo in the various parts of the alimentary canal. 3. How do the lymphatics commence? Whence is the lymph derived? Mention the circumstances which influence its flow. 4. Describe a lobule of the liver, and an individual liver cell. 5. Describe the functions of the vagus as a cardiac nerve. 6. State the evidence in favour of the localisation of motor centres in the cerebral cortex. Where are the centres connected with the movements of the right arm supposed to be situated?

Note.—This paper also applies to candidates under the old regulations for the licence of the Royal College of Physicians of London and for the membership of the Royal College of Surgeons of England.

ANATOMY.

Friday, October 5th, 1888, from 2 to 5 P.M.

Candidates must answer at least four questions. Candidates unable to answer four questions must report the fact to the presiding examiner, and are not allowed to proceed with their examination.

1. Describe the upper end of the femur (head, neck, and trochanters), giving muscular and ligamentous attachments. 2. Give the nerve supply and actions of the following muscles: (*a*) Buccinator, (*b*) teres major, (*c*) first dorsal interosseous of hand, (*d*) tensor fasciæ femoris, (*e*) adductor longus, (*f*) gastrocnemius. 3. Describe the fornix. 4. Give the course and relations of the brachial artery, and enumerate its branches. 5. Describe the position and relations of the right kidney. 6. Give the relations of the internal and external popliteal nerves, and enumerate their branches.

Note.—This paper also applies to candidates under the old regulations for the licence of the Royal College of Physicians of London and for the membership of the Royal College of Surgeons of England.

MEDICAL NOTES IN PARLIAMENT.

Victoria University Bill.

IN the House of Lords, on the 13th inst., on the motion of Earl Granville, this Bill was read the third time and passed.

Public Health Act Amendment (Buildings in Streets) Bill.

In the House of Commons, on the 12th inst., this Bill passed through committee with an amendment; and the Bill as amended was considered and then read a third time.

Criminal Literature.

Mr. Channing, for Mr. S. Smith, asked the Secretary of State for the Home Department whether his attention had been drawn to the report that the two boys who were now waiting their trial for murder in Maidstone Gaol had been addicted by their own confession to the reading of such books as "Dick Turpin," "Varney the Vampire; or, the Feast of Blood," and "Sweeney Todd," and that one of them told a correspondent of the *Tunbridge Wells Advertiser* that he was prepared for his fate now he had made his name known; whether he was aware that there was an enormous circulation of criminal literature among the young, and that about twenty-five English newspapers had recently been publishing the lives of Charles Peace, William Palmer, the Rugeley poisoner, and the murders of Burke and Hare; whether he was aware that those stories, attractively written, were widely circulated and read by enormous numbers of children, and instigated many of them to the commission of crime; whether any check could be put upon the circulation of those pernicious works; and whether a record could be kept of the class of books or papers found on the persons of youthful criminals when arrested, as a guide to future legislation on the subject.—Mr. Matthews, in reply, said that he had seen the statement referred to, and had instructed the Prison Commissioners to ascertain whether the statement emanated through the prison officials, as reported. The hon. member might be quite justified in supposing that there is a large circulation of demoralising literature; and, as he had previously stated, the Government have taken, and are prepared to take, such steps as prudence dictates and the law enables them to take in order to check this circulation. He would undertake to give careful consideration to the last portion of the hon. member's question.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BARKER, A. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of the Vale District, Wantage Union.

BUCKLEY, T. W., M.R.C.S., L.S.A., has been appointed Medical Officer of the "A" District and the Workhouse, Thrapston Union.

HANSON, ALFRED, M.R.C.S., L.R.C.P., has been appointed Medical Officer and Public Vaccinator of the Mablethorpe District of the Louth Union, vice Dr. Anderson, deceased.

HARRIS, J. RUSSELL, M.D. Brux., M.R.C.S., has been appointed Public Vaccinator to the Strand Union and Medical Officer of the Western District of the Strand Union, vice R. W. Dunn, deceased.

HAYCOCK, H. E., L.R.C.P. Ed. and L.M., M.R.C.S., has been appointed Medical Officer of the Third District, Hitchin Union.

JOY, F. W., L.R.C.P., L.M. Ed., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health for the Thetford Borough and Rural District.

POOLMAN, ARTHUR E., B.A., M.R.C.S., L.R.C.P., late House Surgeon, Guy's Hospital, has been appointed Resident Medical Officer to the Private Home, Guy's Hospital.

SMITH, JOHN W., M.B. Edin., M.R.C.S., has been appointed Junior Demonstrator in Anatomy in Owens College, Manchester.

SUTTON, ALFRED, M.R.C.S., L.S.A. Lond., has been appointed Government Medical Officer at Bunleigh, Queensland.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House Surgeon. Salary £30 per annum, with board, washing, and lodging.

BRADFORD INFIRMARY AND DISPENSARY.—House Physician. Salary £100 per annum, with board.

COUNTY ASYLUM, Whittingham, Preston, Lancashire.—Qualified Dispenser. Salary £50 a year, with board, lodging, and washing.

GLOUCESTER FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Assistant Medical Officer.

HOSPITAL FOR EPILEPSY AND PARALYSIS, 32, Portland-terrace, Regent's-park, N.W.—Physician to Out-patients.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Surgeon. Also an Assistant Surgeon.

KENT AND CANTERBURY HOSPITAL.—Assistant House Surgeon and Dispenser (one office). Salary £50 per annum, with board, lodging, and washing.

LONDON LOCK HOSPITAL AND ASYLUM, Harrow-road, W.—Surgeon to the Out-patient department.

LONDON MEDICAL MISSION, 47, Endell-street, W.C.—Fully qualified Evangelical Gentleman to assist in the work of a London medical mission. Salary £150.

NATIONAL DENTAL HOSPITAL, 149, Great Portland-street, W.—Lecturer on Dental Anatomy and Physiology. Also an Assistant Dental Surgeon.

POOLE FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Medical Officer. Salary £200 per annum and extras, with house &c.

ROYAL HANTS COUNTY HOSPITAL, Winchester.—House Surgeon. Salary £100 per annum, with board and lodging.

ROYAL SOUTH LONDON DISPENSARY, St. George's-cross, Lambeth, S.E.—Surgeon to the Walworth District. Honorarium £20 per annum.

ROYAL UNIVERSITY OF IRELAND, Dublin.—Examiners: Two in Midwifery, two in Medical Jurisprudence, and two in Materia Medica.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £80 per annum, with board, washing, and lodging.

Births, Marriages, and Deaths.

BIRTHS.

BREACH.—On the 1st inst., at Yattendon, near Newbury, Berkshire, the wife of J. H. Breach, M.R.C.S., of a daughter.

MASTERS.—On the 7th inst., at Westall House, Brook-green, W., the wife of J. Alfred Masters, L.R.C.P. Lond., M.R.C.S., of a son.

MARRIAGES.

COCKEY—GILLOTT.—On the 12th inst., at the Parish Church of St. Mary and Eonswythe, Folkestone, Edmund Percival Cockey, M.D. Lond., eldest son of Edmund Cockey, surgeon, of Frome, Somerset, to Ellen Hortense, youngest daughter of the late George Gillott, of Boulogne-sur-Mer.

HUXTABLE—WALSH.—On Aug. 15th, at St. Mary's Church, Brisbane, Louis Ralston Huxtable, M.B., son of Chas. Henry Huxtable, Esq., of Hobart, to Lilie, eldest daughter of the late Hon. William Henry Walsh, Brisbane.

WILKINSON—LAWLESS.—On the 6th inst., at Calry Church, Sligo, Clement John Wilkinson, M.R.C.S., &c., Windsor, eldest son of the Rev. T. H. Wilkinson, to Katherine Elizabeth, eldest daughter of the late Edmund Lawless, Staff Surgeon, R.N.

DEATHS.

AITKENS.—On the 12th inst., at Coventry, John Alexander Aitkens, M.R.C.S., elder son of John Aitkens, Esq., of Twickenham, aged 35.

CHALMERS.—On the 9th inst., at Keppel-street, Russell-square, John Chalmers, M.D. Glas., C.M. Univ. Glas. and St. Barthol., Vice-Pres., Brit. Gynæc. Soc., of above address, and Caledonian-road, N., aged 49.

CHILDS.—On the 8th inst., at Aldridge-road-villas, Westbourne-park, Surgeon-Major George Borlase Childs, late of the 4th Battalion Royal Fusiliers, and late Surgeon-in-Chief for over forty years to the City Police Force.

COMBES.—On the 7th inst., at Galeston, Eton-avenue, South Hampstead, Reginald Hare Combes, M.R.C.S., second son of the Hon. Edward Combes, C.M.G., of Glanmire, New South Wales, in his 29th year.

COTTON.—On the 8th inst., at Abington-street, Northampton, George Cotton, M.R.C.S., in his 67th year.

GORDON.—On the 8th inst., at Arundel-gardens, W., Huntly George Gordon, M.D., Surgeon-General (late 95th and 60th Regiments), aged 67.

MACFARLANE.—On the 8th inst., T. B. Macfarlane, L.R.C.P. and S. Ed., son of the Rev. T. and Eleanor Macfarlane, Clyro Vicarage, aged 27.

OLIVER.—On the 11th inst., at Consett Hall, Co. Durham, Edith Rosina, wife of Thomas Oliver, M.D., Newcastle-upon-Tyne, and eldest daughter of William Jenkins, J.P., aged 36.

ROBSON.—On the 9th inst., at his residence, 3, North Bailey, Durham, Robert Naisbit Robson, F.R.C.S., L.S.A., in his 71st year.

SHAW.—On the 10th inst., at New-street, Leicester, M.D. Cantab., F.R.C.P.L., Justice of the Peace for the County and Borough of Leicester, in his 88th year.

TAYLOR.—On the 7th inst., at Rock House, Cintra-park, Upper Norwood, S.E., George Taylor, M.D., F.R.C.S., J.P., in his 70th year.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

BAILLIÈRE, J. B., ET FILS, Paris.

Hygiène de la Vue. Par X. Galezowski and A. Kopff. Avec 44 figures intercalées dans le texte. 1888. pp. 328.

BUREAUX DU PROGRÈS MÉDICAL, Paris.

La Mort par la Décapitation. Par le Dr. Paul Loye. Préface de M. le Dr. P. Brouardel. 1888. pp. 285.

GOVERNMENT PRINTING OFFICE, Washington.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Vol. IX Medicine (Popular)—Nywelt. 1888. pp. 1054.

The Medical and Surgical History of the War of the Rebellion. Part 3. Vol. I. Medical History. Being the Third Medical Volume. By Chas. Smart, Major and Surgeon, United States Army. 1888. pp. 989.

HIRSCHWALD, AUGUST, Berlin.

Grundzüge der Arzneinrittellehre. Ein Klinisches Lehrbuch. Von Dr. C. Binz. Zehnte neu bearbeitete Auflage. 1889. pp. 312.

LEWIS, H. K., Gower-street, London.

A Handbook of Therapeutics. By Sydney Ringer, M.D., F.R.S. Twelfth Edition. 1888. pp. 632.

A Handbook of Surface Anatomy and Landmarks. By Bertram C. A. Windle, M.A., M.D. Dub. 1888. pp. 154.

Section Cutting and Staining. A Practical Guide to the Preparation of Normal and Morbid Histological Specimens. By Walter S. Colman, M.B. Lond. 1888. pp. 107.

Epitome of Diseases and Injuries of the Ear. With a chapter on Naso-pharyngeal Diseases causing Deafness. By W. R. H. Stewart, F.R.C.S., L.R.C.P. Ed. 1888. pp. 126.

Illustrated Lectures on Ambulance Work. By R. Lawton Roberts, M.D. Third Edition. pp. 206.

LONGMANS, GREEN, & Co., London.

Animal Physiology. By W. S. Furneaux. With 218 Illustrations. 1888. pp. 243, price 2s. 6d.

Masks or Faces? A Study in the Psychology of Acting. By William Archer. 1888. pp. 232, price 6s. 6d.

Physical Realism, being an Analytical Philosophy from the Physical Objects of Science to the Physical Data of Sense. By Thomas Case, M.A. 1888. pp. 387, price 15s.

OLIVER & BOYD Edinburgh.

The Transactions of the Edinburgh Obstetrical Society. Vol. 13. Session 1887—88.

POLK, R. L., & Co., Detroit, Mich.

Medical and Surgical Directory of the United States. 1886. pp. 1451, price 7 dollars.

SMITH, ELDER, & Co., Waterloo-place, London.

A Treatise on Surgery; its Principles and Practice. By T. Holmes, M.A. Cantab. With 428 Illustrations. Fifth Edition. Edited by T. Pickering Pick. 1888. pp. 1004.

The British Journal of Dermatology, published monthly, No. 1, Vol. I., November, 1888. Edited by Malcolm Morris, London, and G. H. Brooke, Manchester (H. K. Lewis, Gower-street, London), price 1s.—Syphilis of the Larynx, Trachea, and Bronchi; by J. Solis Cohen, M.D., Philadelphia (Wm. J. Dornan, Philadelphia, 1888).—The Antiseptic Vaults of St. Michan's Church, Dublin; by Arthur Vicars, F.S.A. (E. Ponsonby, 116, Grafton-street, Dublin, and Simpkin, Marshall, and Co., London, 1888.)

Medical Diary for the ensuing Week.

Monday, November 19.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Adjourned Discussion on Dr. Howard's paper on a New Method of Raising the Epiglottis. Mr. Knowsley Thornton: Some additional cases illustrating Hepatic Surgery.

Tuesday, November 20.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M.

ROYAL STATISTICAL SOCIETY (Royal School of Mines, 28, Jermyn-street, S.W.)—8 P.M. First Ordinary Meeting of Session. The President's Inaugural Address will be delivered by Dr. T. Graham Balfour.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Lockwood: Hernial Sacs and their Contents.—Mr. D'Arcy Power and Mr. C. Evill: Dislocation of Shoulder without Rupture of Capsule.—Dr. Ralfe: Aortic Aneurysm after Galvano-puncture.—Mr. W. H. Kesteven: Primary Cancer of Pancreas.—Dr. F. H. Hawkins: Aortic Valvular Disease.—Dr. Perry: Acute Intestinal Obstruction. Card Specimens.—Mr. Bland Sutton: (1) Spina Bifida (2) Supernumerary Legs in Frogs; (3) Supernumerary Mammæ in Monkeys.—Mr. Targett: Dermoid Cyst near Knee.—Dr. A. H. Robinson: Phosphatic Concretion from a Recto-vaginal Fistula.

Wednesday, November 21.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical visits on Wednesday and Saturday at 9.15 A.M.

SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND COMMERCE.—8 P.M. First Ordinary Meeting of Session. Opening Address by the Duke of Abercorn (Chairman of the Council).

Thursday, November 22.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, November 23.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Thomas Oliver: On a Cause of Speedy Death in Heart Disease (with case).—Dr. W. H. Dickinson: Case of Purulent Pericarditis successfully treated by Aspiration and Free Incision.—Mr. R. W. Parker: Case of Extensive Pyo-pericardium associated with Osteo-myelitis, free incision, irrigation, death.—Dr. Arkle and Dr. Bradford: Case of Aortic Aneurysm Rupturing into Descending Vena Cava. Living Specimens:—Mr. H. H. Clutton: Complete Compound Dislocation of Elbow, perfect recovery of joint.—Dr Payne: Case of Molluscum Fibrosum.—Mr. H. T. Baker: Case of Genu Recurvatum.

Saturday, November 24.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, November 15th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Nov. 9	29·86	S.E.	45	44	..	47	39	·17	Raining
,, 10	29·89	S.E.	41	39	74	48	37	..	Cloudy
,, 11	29·85	S.E.	50	49	..	51	39	·23	Overcast
,, 12	29·77	S.E.	48	47	..	54	46	..	Overcast
,, 13	29·39	S.E.	52	51	81	55	49	·19	Overcast
,, 14	29·91	S.W.	50	49	80	57	47	..	Cloudy
,, 15	30·15	S.W.	52	51	..	54	49	..	Raining

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

WHAT NEXT!

THE wide distribution of the following circular amongst members of the medical profession can only be looked upon as a piece of impertinence, and is not likely to further the ends of the author. The cool assumption of superiority to regular medical practitioners, and the innuendo as to their inability to treat "cases of dislocation, sprains, stiff joints, &c.," are curious evidences of that kind of "confidence" which is synonymous with the schoolboy word "cheek."

> "Mr. —— ——, pupil of the late Mr. ——, the well-known bone-setter, has now arranged, at the urgent request of numerous friends, to see cases of dislocations, sprains, stiff joints, &c., at ——, ——, where he may be consulted between the hours of —— and ——, on —— and ——, or by appointment on other days. Mr. —— having gone through the full curriculum of medical and surgical study at —— Hospital, and having had subsequent varied surgical practice in command of a Red Cross Ambulance in the Russo-Turkish War, in addition to the exceptional advantage of working with the late Mr. ——, at the class of cases which he now undertakes, has every confidence in sending this notice to the members of the Medical profession, trusting that they will assist him in his attempt to fill the universally acknowledged void left in this class of practice by the late Mr. ——'s death."

Alpha.—It would be courteous to make such a call. The card is better avoided. A brass plate and a little time and patience are usually sufficient.

If *J. G.* will consult our advertisement columns, he will probably obtain information of an institution or home suitable for the case.

FEVER AT SPENNYMOOR.

To the Editors of THE LANCET.

SIRS,—An outbreak of scarlatina and typhoid fever has occurred in my district under the following circumstances. Milk has been delivered in the town for which I am medical officer of health from an outside dairy. I have traced the cause of the outbreak to the milk, as those connected with the said dairy have had both scarlatina and typhoid among them since July last. I would be glad to communicate with any medical gentleman who has had a similar case in his district as to how he acted under the circumstances.

I am, Sirs, yours faithfully,

Spennymoor, Nov. 13th, 1888. MEDICAL OFFICER OF HEALTH.

Gordon Devane, M.D. U.S.A.—We cannot approve of medical publications addressed to the public.

THE DOLL SHOW AT THE HOSPITAL FOR SICK CHILDREN.

THE following address (written by J. Ashby-Sterry) was spoken by Mrs. Keeley at the concert preceding the Doll Show for the benefit of the Hospital for Sick Children, Great Ormond-street, on Nov. 9th, 1888.

You asked me here to come and see your Show—
I thought I'd done with Dolls some years ago!
I've given up the dolls of childhood's age,
And said good-bye to puppets of the stage!

I've done with skipping-ropes, and hoops, and toys,
With all the simple sport of girls and boys;
And as for hoops? I scarcely one have seen
Since those extensive days of crinoline!
Some toys remain! But disillusion comes
With sawdust stuffing and with broken drums!

And yet I count my warmest friends among
The bright, the merry, and the laughing young.
The children's laughter does me good; and I
Have made their grannies laugh in days gone by?
Their grandchildren repay me with their glee,
And make me feel Eighteen at Eighty-three.
So here I stand, the Children's Advocate,
To plead their cause in Eighteen Eighty-eight!

We talk of children's happiness; but who
Can picture half the sorrow they go through?
Pain's hard for *us* to bear—'tis doubly so
For those poor tiny mites, who do not know
Why they should suffer, as they listless lie,
To dream and ponder of the reason why?
And so I thought just now. I chanced to stray
Within a Ward not very far away:
A well-warmed, homish room—so clean and light,
So cheerful, quiet, flower-deckt, and bright.

In one snug corner, in a cot, I note,
Propped up by pillows—in a scarlet coat—
A little girl, who ne'er for many a day
Has had a hope, or thought, or strength for play.
Though pain now slumbers, she is ill and weak—
Too feeble e'en to move, or laugh, or speak:
A pair of little wasted hands still keep
In close embrace a well-worn woolly sheep.
A sweet, sad smile half flickers o'er her face,
And in those big grey eyes you'll clearly trace
The sorrow that this little one has seen—
The weariness her little life has been!
Those eyes could better plead, in silent grief,
Than *I*, who for our Children hold a brief!

I plead for them. I beg you each to bring
A tiny feather for our big New Wing:
Let each one use his thought, his means, his might,
To aid us in our new successful flight!

I crave for them your sympathy untold,
Your love, your help, your pity—and your gold!
The last I'm bound to have; for, you must know,
I played *Jack Sheppard* many years ago!

I've not forgot his impudence, his dash—
His rare persuasive power when seeking cash!
Stand and deliver—sovereigns, fifties, fives—
We want *your* money, for we want *their* lives!

Perplexed.—The question is difficult to answer; so much depends on the exact terms of the understanding and the precise character of the correspondence.

Mr. C. B. Spence.—Certainly.

FEES FOR PROFESSIONAL ATTENDANCE ON STREET ACCIDENTS.

To the Editors of THE LANCET.

SIRS,—I shall feel obliged if you will kindly advise me what proceedings I should take to recover my fee for professional attendance in the following case.

In May last I was summoned by the policeman on duty to attend a poor woman who had met with an accident in the street. I attended and dressed her head (she had sustained a small scalp wound), and sent her home, and I heard nothing further of her. Soon afterwards I sent my account for attendance to the superintendent of police (who was present when the accident occurred, and who sent the policeman to my house). He sent the bill back to the sergeant of the district, who came to tell me that I had no claim against the police, and was to apply for payment from the patient. I do not know the patient's name or address. I am, Sirs, yours faithfully,

Leicester, Nov. 13th, 1888. J. T. H. DAVIES, M.D.

*** We fear our correspondent has a legal claim only against the patient, though we think it is a hard case, and the police authorities ought to see him paid.—ED. L.

THE GERMAN MEDICAL FACULTIES.

ACCORDING to Dr. Ascherson's "Deutscher Universitäts-Kalender," cited in the *Deutsche Medizinal-Zeitung*, and reproduced in the *New York Medical Journal*, the strength of the medical faculties of the various universities in the German Empire is as follows:—

	Ordinary professors.	Extraordinary professors.	Privat-Docenten.
Berlin	17	28	59
Bonn	9	10	8
Breslau	9	17	13
Erlangen	8	4	4
Freiburg	12	5	9
Giessen	8	3	3
Göttingen	12	7	4
Greifswald	9	7	5
Halle	10	9	8
Heidelberg	12	8	8
Jena	9	8	5
Kiel	8	4	12
Königsberg	8	10	9
Leipsic	15	8	22
Marburg	13	3	4
Munich	13	9	25
Rostock	8	2	2
Strassburg	15	7	12
Tübingen	8	6	2
Würzburg	9	8	9
Total	212	163	223

Vigilant.—The Medical Council has never removed a name on such grounds, and it is very doubtful if it has the power to do so. Our correspondents should study Clause XXIX. of the Act of 1858—the basis of the disciplinary powers of the Council. For offences of the kind named the offender should be dealt with by the medical body or bodies from which he holds his diploma. In many instances a firm remonstrance would be sufficient to correct the evil.

Dr. Sheahan.—The distinction was certainly unintentional, but was not of our making.

RENEWAL OF LEASES.

To the Editors of THE LANCET.

SIRS,—This is not exactly a medical subject, but as it is one that concerns the profession I trust you will allow the matter to be canvassed in your columns. Here briefly is my case.

Several years ago, I bought a practice and had the lease of the house transferred to me. That lease expired at Christmas last. The landlord refused then to renew the lease, but said I might remain if I paid an increased rental of more than 15 per cent., giving reasons of his own for the non-renewal. After thus remaining for about twelve months a quarterly tenant, the landlord called the other day and said I might now have a lease for ten years provided I paid the increased rental and a premium of £70, which adds fully 12½ per cent. more to my rent. "The law allows it, and the court awards it," as Portia says, and what could I do but submit to these extortionate terms, for to remove an old established practice under the most favourable circumstances is never advantageous, and to be compelled to do so at a quarter's notice might be disastrous. Well, I reluctantly agreed to the terms, thinking in my innocence that I knew the worst. Judge then of my astonishment when a few days afterwards I received from the landlord's solicitor a draft of the lease, consisting of eleven foolscap pages of the usual unmeaning verbiage, and accompanied with a note to say that I must bear all the expenses—£8 17*s.* 6*d.*—of the drawing up of the lease, together with the counterpart to be held by the landlord. Even a worm will turn, and it is this latter condition which has made me rebel. I fear, however, I am powerless and must submit, and can only pray that soon an alteration of this execrable law, of the landlord pocketing the unearned increment, may be brought about. There is a block of seven buildings in the terrace all alike in size and accommodation, and I know that I am paying from 25 to 30 per cent. more rent than any of the other tenants, and yet the landlord is not satisfied, but must needs give another turn of the screw in the shape of lawyer's expenses. What can I do in the matter? Is it not the custom that in deeds of this kind the law expenses are divided between landlord and tenant?

Let me apologise for trespassing on your valuable pages with this subject, but as it is one of vital importance to many struggling general practitioners, I trust you may find room for its discussion.

I am, Sirs, yours truly,

Nov. 10th, 1888. JACOBUS.

*** We are advised that the custom is for the lessee always to pay for the lease.—ED. L.

FEES FROM MEDICAL BRETHREN.

IN such cases as those mentioned our correspondent would be quite justified in taking fees. The spirit of the rule to the contrary is not violated by deferring to the feeling of a neighbour or a brother practitioner who for special reasons strongly desires to give an *honorarium* to his medical brother.

Dr. Smith (Lewisham-road) would be glad to receive information respecting Dr. Elliott's legacy for nurses.

EYESIGHT OF SCHOOL CHILDREN AT ANTWERP.

DR. DE METS of Antwerp has just made known the results of his examination of the eyes of the children attending the primary schools of that city. He examined 7040 scholars, and directed his attention chiefly to the state of their refraction and their chromatic sense. Their ages ranged between seven and fourteen years, so that it is not to be wondered at that he found a very small percentage of myopes amongst them. Only 2·13 per cent. were myopic, and of these nearly one-half had but one dioptre of myopia. Cohn, on the other hand, found 6·7 per cent. of the children in German elementary schools to be suffering from more than one dioptre of myopia. Dr. De Mets thinks that this great difference between the two countries is due to a hereditary predisposition peculiar to the race; but he also admits that the construction, furnishing, and lighting of the schools have a great influence on the development of myopia. Thus in nine girls' schools which were well lighted there was 1·74 per cent. of myopes, as against 4·83 per cent. in three schools badly lighted. And as regards boys, the figures are equally striking—viz., in nine well-lighted schools the percentage was 1·69, as against 2·67 in badly lighted buildings. Dr. Deneffe recently pointed out the superiority of the chromatic sense in woman, and Dr. De Mets' observations confirm this statement as regards female children. He thinks it is due to the fact that girls are so much more in contact with colours in their needlework, and that thus their colour sense is educated, and he thinks with Dr. Deneffe that the appreciation of colours should form part of the regular school course.

Fair Play.—Our comments as to the attitude of a medical officer of health in his relation to infectious diseases under the care of other medical practitioners were intentionally worded so as to be of general application, and did not affect to deal specially with a case as to which no detailed information was before us. If the matter should unfortunately come to be publicly discussed, then will be the time to deal with the merits of the case, if, indeed, the circumstances should call for further comment.

Mr. Thorp.—The list is printed as we receive it.

"THE METROPOLITAN HOSPITAL."

To the Editors of THE LANCET.

SIRS,—May I trespass upon your space for the insertion of a reply to Dr. Hunt's letter in your last issue.

In his letter Dr. Hunt omits all reference to the advertised rates of payment, a factor which cannot be ignored in determining this matter. Dr. Hunt writes, p. 949: "It seems to be generally acknowledged that there is a large class of deserving poor &c.," and asks, "Does the Metropolitan Hospital attract these or a superior class of people?" I admit the existence of this class, but contend:—1. That the Metropolitan Provident Medical Association had previously made provision for this class. 2. That no attempt was made to affiliate the work of the hospital with that association, and that (not content to compete on equal terms of payment) the hospital did outbid that association, and secured the support of the public by underselling it in every item of payment. 3. That the wage limit fixed, 25*s.* for a single person and 40*s.* for a man with wife and family, *does* permit the admission of a superior class of persons, to whom an illness means neither financial ruin nor an unpaid doctor. 4. That this departure will seriously affect every practitioner whose work lies within the area of the hospital's operations, and eventually create a demand on the part of the public for lower medical charges. The necessity of paying one's way will force the adoption of such charges, and when the question is asked, Are we to blame the public or ourselves? the only answer possible will be, Ourselves. 5. I yield to none of the medical officers in my desire to see the hospital in efficient working order. I admit that a paying out-patient department may become a proved necessity. I deny, however, that a large scheme for out-door visiting, and midwifery attendance for 15*s.* by practitioners long established in the neighbourhood, can ever be regarded as a justifiable complement of the operations of any London hospital. Lastly, I submit without comment the rates of payment. Adults, 1*d.* a week, or 4*d.* a month; children (not allowed to join without one of their parents), 2*d.* a month each, but 6*d.* a month will include all children in a family under the age of sixteen. An entrance fee of 6*d.* for a single person or whole family joining at the same time, but members of benefit societies will be admitted free; 1*d.* for each prescription and 1*d.* for each bottle. Home visits, when necessary, if notice is received before 10 A.M., free; if notice is not given until after 10 A.M. and before 6 P.M., the charge will be 6*d.*; after 6 P.M. and before 10 P.M., 1*s.*; between 10 P.M. and 7 A.M., 2*s.* Midwifery cases are attended by one of the medical men of this department for 15*s.*

I am, Sirs, yours faithfully,

Dalston, E., Nov. 13th, 1888. FREDK. E. COCKELL, jun., M.R.C.S.

De Lunatico Inquirendo.—The fee is one guinea, together with mileage allowance, which is generally reckoned at the rate of sixpence per mile; but there is no fixed tariff. The guardians are the proper persons to pay.

Mr W. H. Bull's paper will appear very soon.

CARBOLIC ACID POISONING AT SMALLTHORNE.

THIS case was treated by Mr. Middlebrooke, the unqualified assistant of Dr. Lindsay, with glycerine. This treatment was criticised adversely by Mr. Wilkinson, a neighbouring practitioner. It is to be regretted that Mr. Middlebrooke did not call in Mr. Wilkinson. We gather from the newspaper that Mr. Middlebrooke resides at a distance from his principal, Dr. Lindsay. We would remind Dr. Lindsay of the severe condemnation of this arrangement by the Medical Council. The facts of this case supply a striking illustration of the objections to it. The coroner said that the legal profession would be "down upon" such cases of illegal practice in "two minutes."

THE TELEPHONE AND BRANCH PRACTICES.

To the Editors of THE LANCET.

SIRS,—For some years my partner and I contemplated connecting our houses, distant about five miles in a rural district, with the telephonic system. But on applying at the General Post Office, we found their terms so excessive that we felt compelled to abandon the undertaking. We have since been advised to put ourselves into communication with the Western Counties and South Wales Telephone Co., and have done so, with the most satisfactory results. For a very moderate rental this company has run a private wire between our houses, and it has answered admirably in every way. Though five miles apart, we are able so to arrange our work each morning as to obviate the necessity of both going over the same ground—a distinct saving, not only in horse-flesh, but in time and personal fatigue. Moreover, it is available for prolonged social or professional conference by day or night, supplying in that way a want quite beyond the reach of ordinary postal or telegraph communication. In fact, the advantages are at once obvious, especially to those country practitioners who have partners living at a distance, or who may be working a branch practice.

I am led to write this letter, hoping that our experience may be beneficial to those who are placed in circumstances similar to our own, or who may have hesitated in undertaking the expense of a telephone in consequence of the very high charges required by the Post Office authorities.

I am, Sirs, yours truly,

Salcombe, Nov. 6th, 1888. ALFRED H. TWINING.

ADVERTISING VACCINATORS.

THE following is a remarkable advertisement, and seems to suggest to the public that the advertiser is the only source of calf lymph. The requirement of forty-eight hours, however, would seem to show that, like the rest of the profession, he has to apply to the National Vaccine Institution. If this is so, it is a great injustice to others to advertise as special what is not meant by the institution to be a personal matter. We hope the authorities will take steps to prevent a trade-like use of their supplies.

"Parents can have their Children Vaccinated with Fresh Calf Lymph by giving forty-eight hours' notice to Dr. W——, ——, ——."

PROLONGED SLEEP.

To the Editors of THE LANCET.

SIRS,—I shall be obliged if you will insert this note in your next issue.

Mons. Chauffat, a French gentleman, who last year fell in a trance for, I believe, some thirteen or fourteen days, is again in a like condition, and is now "sleeping" at the Alexandra Palace, where I shall be happy to meet any medical gentleman any afternoon between 3 and 4 P.M. as long as the "sleep" continues. I may add that the attack has already lasted over five days.—I am, Sirs, yours faithfully,

City-road, E.C., Nov. 15th. H. A. SPEED, M.R.C.S., &c.

ERRATUM.—In our report on Nov. 3rd of the meeting of the Fellows and Members of the Royal College of Surgeons, the name of Surgeon-Major Ince was inadvertently misspelled "Innes."

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Grailly Hewitt, London; Sir Morell Mackenzie, London; Dr. Fahlberg, Salbke-Westerhüsen; Dr. O. Sturges, London; Dr. Heron, London; Mr. Mark Judge, London; Mr. Pepper, London; Mr. Neves, Chatham; Dr. Jules Worms, Paris; Dr. Wharry, Surbiton; Mr. Lockwood; Mr. Ashton Ellis, London; Dr. Whitwick, St. John's; Mr. J. C. Balfour, Kiston Lindsey; Mr. Collenette, Wolstanton; Dr. H. F. Winslow, London; Mr. Kingzett, London; Mr. C. A. Cook, Salisbury; Dr. Hardwicke, Dovercourt; Dr. McCaw, Belfast; Mr. Laffan, Cashel; Dr. Rush Field, Easton, Pa.; Mr. de Montbrun, Trinidad; Dr. L. E. Shaw, London; Dr. Perceval, Waratah; Mr. Foulerton, Chatham; Mr. A. Harvey; Mr. Padley, Swansea; Mr. Mackenzie, Kington; Mr. Victor Horsley, London; Mr. Clutton, London; Messrs. Wilson, Salamon, and Co., London; Dr. T. Stevenson, London; Mr. D. Hartley, Cape Colony; Mr. Limont, Newcastle-on-Tyne; Mr. C. Williams, Port Isaac; Surgeon Damania, Pishin; Mr. Makins, London; Dr. Casey, Guernsey; Miss Bathurst, Jersey; Mr. Kelson, London; Dr. Auld, Glasgow; Mr. Snell, Sheffield; Mr. Vogan, Ipswich; Mr. Osborne-Walker, Crick; Dr. Sheahan, London; Dr. Ralfe, London; Dr. R. Barnes, London; Mr. Waywell, Earlestown; Dr. Devane, Bristol; Mr. Garstang, Knutsford; Mr. Tizardi, London; Dr. Humphrey, Cambs.; Mr. Thatcher, Bristol; Mr. Hine, Stockland; Mr. Dilworth, Preston; Mr. F. E. Cockell, jun., London; Mr. W. H. Bull, Stony Stratford; Mr. Noakes, London; Dr. Davies, Leicester; Sir Sydney Waterlow, London; Mr. O'Hanlon, Spennymoor; Mr. Vincent Harris, London; Mr. Constantiudes, London; Major Terry, Winchester; Surgeon-Major Ince; Mr. Frankish, London; Dr. H. Page, Birmingham; Mr. Woodward, Lostwithiel; Mr. Eastwood, Blackburn; Madame Plicque, Paris; Mr. Wright, Manchester; Mr. Earle, Brentwood; Mr. Kimpton, London; Mr. Keetley, London; Mr. De Fraine, Aylesbury; Dr. H. Love, Mitcham; Mr. Hussey, Oxford; D. H. G.; Jacobus; Perplexed, Jamaica; D., London; De Lunatico Inquirendo; Fred.; B., Chippenham; Lady Superintendent, West-end Hospital; C. F., London; Matron, Kent; J. P. S., Lowestoft; W. R., London; A. B., London.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Wood, Pontypool; Mr. Ackland; Dr. McMordie, Belfast; Messrs. Gale and Co., London; Mr. Knesbone, Bedford; Mr. Hardy; Messrs. Rocke and Co., London; Mr. Galt, St. Leonards; Messrs. Isaacs and Co., London; Mr. Pimm, London; Mr. Lloyd, London; Messrs. Stent and Sons, Guildford; Mr. Norris, Weston-super-Mare; Messrs. Slinger and Son, York; Mr. Traill, Ireland; Mr. Lane, London; Dr. Evans, Festiniog; Mr. Ferens, Durham; Mr. Whiteley, London; Mr. Oliver, Newcastle; Mr. Hendry, Eastbourne; Mr. Fraser; Miss Thompson, Wakefield; Mr. Butcher, London; Dr. Taylor, Derby; Messrs. Read and Co., Bristol; Dr. MacLean, Harpenden; Mr. Martin, Isle of Wight; Mr. Gidley, Morpeth; Miss Bramley, Lincoln; Mr. Mason, London; Mr. Hawkins, London; Rev. E. E. Cleal, Wimborne; Homer, London; Medicus, London; Matron, Truro; Sec. Edinburgh School of Medicine; Matron, Wakefield; M. K., London; Victoria Carriage Works, London; Catlin, London; St. John Ambulance Association, London; L. M., London; M.D., London; Royal United Hospital, Bath; Lancs, London; C. P. S., London; Hon. Sec. Leeds Dist. Nurses' Home; Chirurgery, London; S. T., London; The Treasurer, Leeds; R. E., London; A., Southport; M.D., Crewe; A-1, Leeds; E. R., London; C. H., London; M.B., Lewisham; A., London; Lady Principal, Hackney; Ubique, London; B., Chippenham; M. C. U., London; M.; Confidence, London; Miss L., London; J. F. B., London.

Manchester Guardian, Surrey Advertiser, Keble's Margate and Ramsgate Gazette, Herald and Weekly Free Press, Westmoreland Gazette, Hertfordshire Mercury, Night and Day, &c., have been received.

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